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ABSTRACT

This paper is one of three major reports documenting the results of a 1984 survey of Maryland adolescents' knowledge of, attitudes toward, and experiences with drugs and alcohol. An introduction briefly outlines the work of the Maryland Drug Abuse Administration and describes earlier surveys. A methodology section describes 1984 sampling techniques and survey administrations which resulted in 33,079 valid questionnaires from 8th, 10th, and 12th grade students statewide. Computation of statewide estimates is explained. The survey results reported in this paper are organized into three sections. Part One presents statewide and geographic subdivision estimates of alcohol use among Maryland adolescents computed from the 1984 survey. The results are categorized as: (1) prevalence of alcohol use; (2) alcohol abuse and consequences; and (3) demographic characteristics of Maryland adolescents who use alcohol. Part Two examines trends in alcohol use among Maryland adolescents by comparing and contrasting statewide and subdivision estimates for 1978, 1980, 1982, and 1984. Part Three compares the Maryland results to the results obtained by the National Institute on Drug Abuse in its 1978, 1980, 1982, and 1984 surveys of student drug use in America. The report's conclusion summarizes the findings of the 1984 survey and concludes that alcohol use, as reported by adolescents between 1978 and 1984, has declined in Maryland. Relationships found between demographic characteristics and the use of alcohol are also summarized. Twenty-eight data tables appear throughout the text and the Maryland Adolescent Survey 1984 is appended. (NB)

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1984 SURVEY OF DRUG ABUSE AMONG MARYLAND ADOLESCENTS

REPORT ON ALCOHOL USE

This report documents the background, methodology, and statewide results of the survey of drug abuse among adolescents in the State of Maryland. The survey was administered by Macro Systems, Inc., under contract with the Maryland Drug Abuse Administration (MDAA) of the Department of Health and Mental Hygiene in cooperation with the State Department of Education. The survey was initiated in the fall of 1984.

INTRODUCTION

Early in the 1970s, the MDAA, charged with the responsibilities of planning, developing, and monitoring drug abuse education, prevention, and treatment programs in the State, established an integrated management information system. This system was designed to monitor the needs of, and the treatment services provided to, the State's drug abusing population. The system currently includes a client-based treatment program reporting process, periodic incidence and prevalence studies, and surveys of special populations. This latter and key aspect of the system was developed to generate information necessary to defining the extent and distribution of drug abuse among Maryland's population in general and the adolescent population in particular. Accordingly, a series of surveys conducted in secondary schools across the State since 1973 collected useful information on drug use, attitudes, and knowledge among Maryland adolescents. This information allows MDAA to plan more efficient and effective education and prevention programs; enables a more accurate ordering of priorities and more optimal and targeted allocation of agency resources; assists in the examination of past trends and projections of future trends; and permits an evaluation of prevention strategies.

The first survey, conducted in 1973, obtained information on 10th-grade students only. In 1975, in order to compare observations during different time

periods and to observe long-term trends, both 10th- and 12th-graders were surveyed. With the apparent trend of drug involvement among younger adolescents, the survey was expanded in 1978 to include 8th-grade students in addition to 10th- and 12th-graders. These same three grade levels were surveyed in 1980, 1982 and again in 1984. In 1984, students who were enrolled in private schools in Prince George's County were also surveyed; the results are analyzed separately as a pilot study. A summary of these surveys in terms of the number of respondents, grades surveyed, and percent of total population responding is provided in Table 1, below.

TABLE 1
Maryland State Adolescent Drug Abuse Surveys

Year	Number of Respondents	Grades Surveyed	Percent of Total Public School Population
1973	21,238	10th	29.0 percent of the 10th-grade students in Maryland
1975	26,884	10th and 12th	21.1 percent of all 10th-grade students and 21.5 percent of all 12th-grade students in Maryland
1978	46,700	8th, 10th, and 12th	28.6 percent of 8th-, 10th-, and 12th-grade students
1980	35,823	8th, 10th, and 12th	20.0 percent of 8th-, 10th-, and 12th-grade students
1982	38,612	8th, 10th, and 12th	22.5 percent of 8th-, 10th-, and 12th-grade students
1984	36,649	8th, 10th, and 12th	22.5 percent of 8th-, 10th-, and 12th-grade students

The objectives of the 1984 survey were essentially similar to those of previous surveys. They included the following:

- To estimate the nonmedical utilization rates of selected drugs among an adolescent population for the State of Maryland and for each political subdivision.
- To measure the knowledge that a sample of adolescents has about drugs, i.e., physiological and psychological effects, drug definitions, street terms, and to ascertain their attitudes regarding certain aspects of drug abuse.
- To correlate drug use with several variables, including drug knowledge, attitudes toward drugs, and demographic factors.
- To measure changes in adolescent drug use patterns over a period of time by comparing 1984 results with surveys in the past.

- To provide for student assessment of information and instruction concerning drug abuse presented in school curricula.

In short, the purpose of the 1984 survey like its predecessors was to obtain a better understanding of young people's knowledge of, attitudes toward, and experiences with drugs as well as alcohol. The information collected in this manner will be used to enhance drug treatment and prevention programs and to improve communication about the use of substances among adolescents, parents, and educators throughout Maryland.

METHODOLOGY

In administering the 1984 survey, a sampling plan similar to that employed in 1978, 1980, and 1982 was implemented to allow for direct comparisons across the four survey years. All 24 subdivisions in the State were requested to participate in the survey and only four (Kent, Cecil, Talbot, and Anne Arundel) declined. The same schools surveyed in previous years were included in the 1984 sample with a few exceptions. For schools that were closed since the last survey, suitable replacements were found with the assistance of subdivision contacts. One other school was dropped at the subdivision's request and replaced. In subdivisions with relatively smaller enrollments, all applicable schools were surveyed. In all larger subdivisions, including Howard County, which had previously required 100 percent participation, a sample set of schools was selected. Montgomery County developed a special county-specific sampling plan, which included 13 schools with only one grade (8th, 10th, or 12th) sampled per school.

As in previous years, the 1984 survey was self-administered in large group settings within sampled 8th, 10th, and 12th grades. The confidential nature of the survey, i.e., individual respondents were not identified, was designed to allow students to answer questions honestly, without fear of repercussions. The survey was administered to students by well trained, professional data collectors. The 1984 survey questionnaire is included in this report as Appendix A.

One hundred and twenty-one schools were included in the sample, with a total enrollment of 43,684 adolescents (8th graders--15,388; 10th graders--15,402; 12th graders--12,894). Eighty-four percent of the original sample participated in the survey (8th graders--13,835; 10th graders--12,535; 12th graders--10,191). It should be noted that some questionnaires were deemed to be invalid and were discarded as a result of extensive nonresponse and/or logical inconsistencies. From the 48,684 adolescents in the original sample, 33,079 questionnaires representing 90.5 percent of the completed questionnaires and 75.7 percent of the sample were considered to be valid and were included in the analysis. Table 2 summarizes selected statistics describing the sample employed in the 1984 survey. The enrollment in sampled schools, the number of completed questionnaires (excluding absentees and refusals), the number of valid questionnaires (excluding those eliminated for having failed to meet standards of completeness and consistency), the percent of the original sample from whom valid questionnaires were obtained, and the percent of respondents with valid questionnaires, are presented by grade level and subdivision. Statewide sample totals are also included.

Statewide estimates were computed following the application of weighting procedures. First, each participating subdivision was assigned a weighting factor that was equal to the ratio of the subdivision's school enrollment (as of 9/30/84) at each grade level to final sample of valid questionnaires for each grade level. The weighting factor was then applied to each case so that the results of larger subdivisions were weighted more heavily than smaller subdivisions. Second, a weighting factor was applied to account for nonparticipating subdivisions. Estimates for these subdivisions were formulated by using the results of similar subdivisions that did participate in the 1984 survey. The estimates for nonparticipating subdivisions were included in the final computations of statewide estimates. Estimated weighting factors for the four nonparticipating subdivisions were computed as follows:

- Anne Arundel = ½ Prince George's County and ½ Baltimore County
- Kent County = Queen Anne's County
- Cecil County = ½ Harford County and ½ Queen Anne's County
- Talbot County = Queen Anne's County

TABLE 2

Maryland Adolescent Sample for the 1984 Survey

Subdivision	Grade	(1) Sample Population	(2) Completed Questionnaires	(3) Valid Questionnaires	(3)/(1) Valid Percent of Enrollment	(3)/(2) Valid Percent of Completed Questionnaires
Allegany	8	996	468	453	45.5	96.8
	10	1,067	449	428	40.1	95.3
	12	974	321	315	32.3	98.1
	Total	3,037	1,238	1,196	39.4	96.6
Baltimore City	8	9,079	973	750	8.3	77.1
	10	9,063	1,362	781	8.6	57.3
	12	5,997	1,056	858	14.3	81.3
	Total	24,139	3,391	2,389	9.9	70.5
Baltimore County	8	6,861	1,213	1,140	16.6	94.0
	10	7,259	1,136	1,070	14.7	94.2
	12	6,990	1,049	1,015	14.5	96.8
	Total	21,110	3,398	3,225	15.3	94.9
Calvert	8	631	637	599	94.9	94.0
	10	687	575	410	59.7	71.3
	12	601	423	404	67.2	95.5
	Total	1,919	1,635	1,413	73.6	86.4
Caroline	8	359	338	314	87.5	92.9
	10	342	301	264	77.2	87.7
	12	288	261	237	82.3	90.8
	Total	989	900	815	82.4	90.1
Carroll	8	1,697	634	564	33.2	89.0
	10	1,666	480	374	22.4	77.9
	12	1,514	319	278	18.4	87.1
		4,877	1,433	1,216	24.9	84.9
Charles	8	1,391	844	813	58.4	96.3
	10	1,510	725	670	44.4	92.4
	12	1,247	439	388	31.1	88.4
	Total	4,148	2,008	1,871	45.1	93.2

TABLE 2

Maryland Adolescent Sample the for 1984 Survey
(Continued)

Subdivision	Grade	(1) Sample Population	(2) Completed Questionnaires	(3) Valid Questionnaires	(3)/(1) Valid Percent of Enrollment	(3)/(2) Valid Percent of Completed Questionnaires
Dorchester	8	424	381	345	81.4	90.6
	10	404	340	312	77.2	91.8
	12	365	301	292	80.0	97.0
	Total	1,193	1,022	949	79.5	92.9
Frederick	8	1,910	849	756	39.6	89.0
	10	1,963	483	443	22.6	91.7
	12	1,543	363	342	22.2	94.2
	Total	5,416	1,695	1,541	28.4	90.9
Garrett	8	444	395	366	82.4	92.7
	10	416	363	360	86.5	99.2
	12	294	249	247	84.0	99.2
	Total	1,154	1,007	973	84.3	96.6
Harford	8	2,421	848	754	31.1	88.9
	10	2,175	796	747	34.3	93.8
	12	2,017	695	680	33.7	97.8
	Total	6,613	2,339	2,181	33.0	93.2
Howard	8	2,068	738	693	33.5	93.9
	10	2,128	735	706	33.2	96.1
	12	1,921	729	694	36.1	95.2
	Total	6,117	2,202	2,093	34.2	95.0
Montgomery	8	7,287	1,487	1,400	19.2	94.1
	10	8,344	1,286	1,228	14.7	95.5
	12	7,765	1,110	1,083	13.9	97.6
	Total	23,396	3,883	3,711	15.9	95.6
Prince George's	8	9,291	942	778	8.4	82.6
	10	9,198	812	713	7.8	87.8
	12	8,134	746	676	8.3	90.6
	Total	26,623	2,500	2,167	8.1	86.7
Queen Anne's	8	399	371	352	88.2	94.9
	10	409	379	329	80.4	86.8
	12	356	301	292	82.0	97.0
	Total	1,164	1,051	973	83.6	92.6

TABLE 2

Maryland Adolescent Sample for the 1984 Survey
(Continued)

Subdivision	Grade	(1) Sample Population	(2) Completed Questionnaires	(3) Valid Questionnaires	(3)/(1) Valid Percent of Enrollment	(3)/(2) Valid Percent of Completed Questionnaires
St. Mary's	8	869	821	735	84.6	89.5
	10	885	756	717	81.0	94.8
	12	801	503	481	60.0	95.6
	Total	2,555	2,080	1,933	75.7	92.9
Somerset	8	296	238	180	60.8	75.6
	10	223	173	155	69.5	89.6
	12	232	141	133	57.3	94.3
	Total	751	552	468	62.3	84.8
Washington	8	1,547	778	715	46.2	91.9
	10	1,440	546	507	35.2	92.9
	12	1,392	432	398	28.6	92.1
	Total	4,379	1,756	1,620	37.0	92.3
Wicomico	8	904	494	461	51.0	93.3
	10	810	539	516	63.7	95.7
	12	730	396	389	53.3	98.2
	Total	2,444	1,429	1,366	55.9	95.6
Worcester	8	411	386	359	87.3	93.0
	10	414	299	279	67.4	93.3
	12	416	357	341	82.0	95.5
	Total	1,241	1,042	979	78.9	94.0
Statewide Public	8	49,285	13,835	12,527	25.4	90.5
	10	50,403	12,535	11,009	21.8	87.8
	12	43,577	10,191	9,543	21.9	93.6
		143,265	36,561	33,079	23.1	90.5

Grade	Total State Enrollment As Of September 30, 1984	Total Final Sample	Sample Percent of Enrollment
8	56,387	12,527	22.2
10	57,135	11,009	19.3
12	49,632	9,543	19.2

The private school results were not used in developing the statewide estimates. The weighting factors employed in computing statewide estimates are presented in Appendix B of this report by subdivision and grade level.

Three major reports, each under separate cover, were prepared to document the results of the 1984 survey, as follows:

- General Report--Includes a presentation and discussion of statewide and subdivision estimates of, as well as trends in, substance use among Maryland adolescents. In addition, the report includes a comparison of Maryland results with nationwide studies.

- Report On Alcohol Use--Includes a presentation and discussion of state-wide and subdivision estimates of, as well as trends in, alcohol use among Maryland adolescents.

- Report On Drug Knowledge And Attitudes--Includes a presentation and discussion of responses related to drug knowledge, attitudes toward drugs, and trends in both drug knowledge and attitudes.

It should be noted that the weighting procedures described above were applied in computing statewide estimates presented in all three reports. In addition, estimates contained in most tables are reported for three age groups--young, middle, and late adolescents. The category "young adolescents" represents students surveyed in 8th grade, with a median age of 13 years. "Middle adolescents" refers to students in 10th grade, with a median age of 15 years. "Late adolescents" refers to those surveyed in 12th grade, with a median age of 17 years. Throughout the reports, "substance" is defined as any drug surveyed excluding cigarettes, "any drug" refers to all drugs surveyed excluding alcohol and cigarettes. Terms related to the frequency of alcohol use during the past year are defined as follows:

"Any Use"	"Other Than Frequent Use"	"Frequent Use"
Use Less than Once a Month	Use Less Than Once a Month	
Use Once a Month	Use Once a Month	
Use Every Other Week	Use Every Other Week	
Use Once a Week	Use Once a Week	
Use Two to Three Times a week		Use Two to Three Times a Week
Use Four to Six Times a a Week		Use Four to Six Times a Week
Use Daily		Use Daily

For all drugs except alcohol, usage levels are derived from questions 64-76. Alcohol usage in the General Report is based on question 77, which is comparable to the other drug usage questions. In the Alcohol Report, however, usage is determined based on questions 78, 80, and 82, which deal with beer, wine, and hard liquor, respectively. The impact of the differences is that the Alcohol Report focuses on adolescents who have used alcohol in the past year, while the General Report focuses on those who classify themselves as current users. Many adolescents who do not consider themselves current alcohol users have in fact used alcohol in the past year.

* * * *

This report--the Report on Alcohol Use--presents the statewide results of the 1984 survey of drug abuse among Maryland adolescents. The results are organized into three sections:

- Statewide and Subdivision Estimates of Alcohol Use Among Maryland Adolescents
- Trends in Alcohol Use Among Maryland Adolescents from 1978 to 1984
- Comparison of Maryland Results with Nationwide Studies

RESULTS

1. STATEWIDE AND SUBDIVISION ESTIMATES OF ALCOHOL USE AMONG MARYLAND ADOLESCENTS

This section of the Report on Alcohol Use consists of a presentation and brief discussion of statewide and subdivision estimates computed from the 1984 survey. Results were organized into three major areas as follows: (1) Prevalence of Alcohol Use, (2) Alcohol Abuse and Consequences, and (3) Demographic Characteristics of Maryland Adolescents Who Use Alcohol.

(1) Prevalence Of Alcohol Use

Table 3 presents the percent of Maryland adolescents reporting use of either beer, wine, and/or hard liquor for each of the 20 subdivisions taking part in the 1984 survey. For each age group surveyed, usage is broken down by

TABLE 3

Percentage of Maryland Adolescents Reporting Use of Either Beer, Wine, and/or Hard Liquor During the Past Year by Subdivision--1984 Survey

Subdivision	Young Adolescents				Middle Adolescents				Late Adolescents			
	Never Used	Any Use	Frequent Use	Median Age at First Use 1/	Never Used	Any Use	Frequent Use	Median Age at First Use 1/	Never Used	Any Use	Frequent Use	Median Age at First Use 1/
Allegany	50.8	49.2	8.8	11	26.4	73.6	21.0	12	14.9	85.1	27.3	13
Baltimore City	47.6	52.4	10.3	11	32.3	67.7	16.5	13	21.4	78.6	17.7	14
Baltimore County	36.9	63.1	8.9	11	14.1	85.9	19.4	13	9.9	90.1	25.4	13
Calvert	40.6	59.4	10.9	10	15.9	84.1	22.4	12	14.9	85.1	26.0	13
Caroline	48.4	51.6	13.1	10	19.7	80.3	19.7	12	13.1	86.9	29.5	13
Carroll	40.0	60.0	4.8	11	23.9	76.1	13.7	12	12.1	87.9	28.1	13
Charles	43.8	56.2	5.8	11	20.7	79.3	18.1	12	13.4	86.6	21.6	14
Dorchester	47.5	52.5	6.7	11	24.7	75.3	19.2	13	13.4	86.6	21.2	14
Frederick	43.8	56.2	7.4	11	22.8	77.2	14.9	13	14.6	85.4	24.3	13
Garrett	42.3	57.7	7.4	10	26.1	73.9	12.2	12	15.8	84.2	25.1	13
Harford	42.2	57.8	7.2	11	18.6	81.4	18.6	13	9.6	90.4	23.5	14
Howard	49.8	50.2	5.6	11	20.1	79.9	16.1	12	12.2	87.8	22.8	13
Montgomery	52.8	47.2	5.9	11	25.6	74.4	11.8	13	15.7	84.3	20.3	13
Prince George's	50.4	49.6	6.9	11	28.2	71.8	8.8	12	15.4	84.6	24.7	13
Queen Anne's	34.1	65.9	7.1	11	14.6	85.4	18.5	12	11.6	88.4	22.9	14
St. Mary's	39.0	61.0	7.2	11	19.5	80.5	18.3	12	18.8	81.2	22.5	13
Somerset	44.4	55.6	6.7	11	25.8	74.2	9.0	13	18.8	81.2	25.6	14
Washington	40.3	59.7	8.1	11	30.0	70.0	11.8	13	17.8	82.2	19.8	14
Wicomico	40.3	59.7	9.8	11	17.6	82.4	19.2	12	12.9	87.1	24.9	14
Worcester	40.7	59.3	11.1	10	21.9	78.1	17.6	12	13.5	86.5	28.7	13
Statewide	45.5	54.5	7.8	11	23.8	76.2	14.9	12	14.4	85.6	23.1	13

1/ Among users in the past year.

self-reported frequency of use.[1/] The median age at first use for users in the past year is also reported.

Statewide estimates of use in the past year of alcohol are greatest among late adolescents (85.6 percent), followed by 76.2 percent for middle adolescents and 54.5 percent for young adolescents. This direct relationship between age and alcohol consumption holds true for each subdivision, too. The use of alcohol increases as adolescents get older, largely due to increased availability and social acceptability. It is important, however, to examine the magnitude of the prevalence rates and their variation among subdivisions.

The variation among subdivisions is substantial. Queen Anne's and Baltimore Counties reported the highest rates of use in the past year among young adolescents (65.9 percent and 63.1 percent, respectively). However, 8.9 percent of this age group in Baltimore County reported frequent use of alcohol, well above the 7.8 percent statewide average, compared to only 7.1 percent for Queen Anne's. The highest rate of use in the past year for middle adolescents occurred in Baltimore County (85.9 percent), followed closely by Queen Anne's County (85.4 percent), Calvert County (84.1 percent), and Wicomico County (82.4 percent). Calvert County recorded the highest rate of frequent use for middle adolescents (22.4 percent), followed by Allegany County (21.0 percent) and Caroline County (19.7 percent). For late adolescents, Baltimore and Harford Counties reported high rates of use (90.1 percent and 90.4 percent, respectively), whereas Caroline County (29.5 percent), Worcester County (28.7 percent), and Carroll County (28.1 percent) showed the highest rates of frequent use of alcohol.

There were no large differences among subdivisions in median age of first use, although young adolescents in Calvert, Carroll, Garrett, and Worcester had a median of 10 years of age compared to 11 for other subdivisions. For middle adolescents, 12 subdivisions showed a median age of first use of 12 years of age and the other subdivisions reported 13. For late adolescents, 12 subdivisions

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[1/] Students were instructed to exclude any religious use of alcohol in their response.

had a median age of 13 and 8 had a median age of 14. Calvert, Garrett, Carroll, and Worcester had median ages of 10, 12, and 13 for young, middle, and late adolescents.

The type of alcohol consumed by Maryland adolescents is illustrated in Table 4. For young, middle, and late adolescents who used alcohol in the past year, beer is the alcoholic beverage most often selected. Hard liquor is the least preferred alcoholic substance. However, Table 5 indicates that while beer is still highly preferred by young, middle, and late adolescents who report frequent use of alcohol in the past year, hard liquor is the second preferred alcoholic beverage, with wine being least consumed.

Table 5 clearly indicates that beer drinking is most prevalent (both any use and frequent use) among late and middle adolescents and least prevalent among young adolescents. Young adolescents who have used alcohol in the past year appear to be more evenly distributed between those who consume beer and those who consume wine.

Below is the ratio of hard liquor use to beer use:

- Young adolescents = .56
- Middle adolescents = .73
- Late adolescents = .77

These data may indicate that adolescents are most likely to begin by drinking beer and commence drinking hard liquor as they get older.

Another indicator of alcohol use is the average weekly quantity of alcohol consumed by Maryland adolescents for those who consumed one or more alcoholic beverages. Table 6 illustrates the average weekly consumption (in ounces) of absolute alcohol from beer, wine, and hard liquor. The results of survey question 78 (frequency) were multiplied by the results of question 79 (quantity), question 80 by question 81, and question 82 by question 83 to produce the average volume of each beverage type consumed on a weekly basis. To convert the volume of the beverage consumed to ounces of absolute alcohol

TABLE 4

Percentage of Maryland Adolescents Reporting Any Use of Beer, Wine, or Hard Liquor During the Past Year--1984 Survey

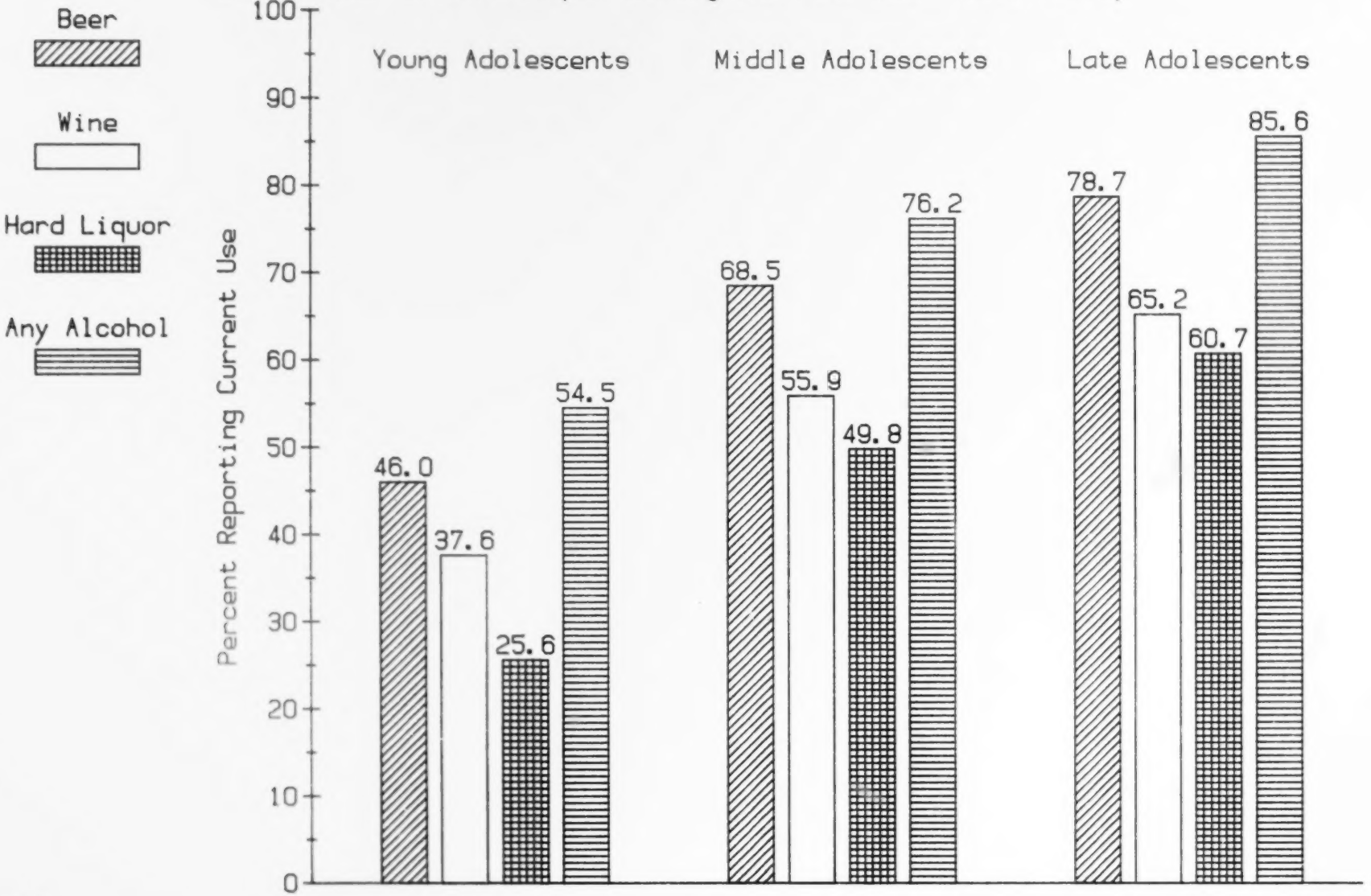


TABLE 5

Percentage of Maryland Adolescents Reporting Use of Beer, Wine or Hard Liquor During the Past Year -- 1984 Survey

	Young Adolescents				Middle Adolescents				Late Adolescents			
	Beer	Wine	Liquor	Any Alcohol	Beer	Wine	Liquor	Any Alcohol	Beer	Wine	Liquor	Any Alcohol
Never Used	54.0	62.4	74.4	45.5	31.5	44.1	50.2	23.8	21.3	34.8	39.1	14.4
Any Use	46.0	37.6	25.6	54.5	68.5	55.9	49.8	76.2	78.7	65.2	60.9	85.6
Frequent Use	6.3	2.4	2.7	7.7	13.0	3.6	5.1	15.0	20.9	4.1	5.6	23.0

TABLE 6

Average Weekly Consumption (in Ounces) of Absolute Alcohol by Maryland Adolescents 1/ by Subdivision--1984 Survey

	Young Adolescents				Middle Adolescents				Late Adolescents			
	Beer	Wine	Liquor	Overall2/	Beer	Wine	Liquor	Overall2/	Beer	Wine	Liquor	Overall2/
Allegany	3.5	1.7	2.7	5.9	6.9	1.9	4.1	10.7	6.4	1.3	2.2	8.8
Baltimore City	3.1	1.7	2.4	5.0	4.1	1.4	2.5	6.2	3.8	1.2	2.3	5.4
Baltimore County	2.9	1.5	2.8	5.3	3.9	1.2	2.2	6.2	4.6	1.2	1.6	6.4
Calvert	3.3	0.8	2.2	4.8	5.4	2.0	3.6	9.1	5.5	1.9	3.2	8.8
Caroline	7.2	3.3	5.4	13.1	6.8	1.6	3.3	9.6	6.9	1.8	2.9	10.0
Carroll	1.9	0.5	1.2	2.6	4.8	2.3	4.2	9.0	7.4	2.4	3.2	11.5
Charles	2.4	0.7	1.2	3.0	5.0	1.3	3.0	7.7	4.0	0.7	2.8	5.6
Dorchester	2.4	0.6	1.0	3.2	4.9	1.1	2.4	6.8	4.9	1.1	2.4	7.0
Frederick	2.8	1.2	2.1	4.6	4.0	1.4	2.1	6.0	4.4	1.0	1.5	5.7
Garrett	2.6	1.3	1.3	4.1	4.1	1.6	3.0	7.3	5.9	1.8	3.0	9.3
Harford	2.1	0.9	1.5	3.1	4.9	1.4	2.8	7.5	5.3	1.4	2.6	7.9
Howard	2.7	0.9	2.3	4.0	3.6	1.5	2.3	6.1	4.5	1.2	2.1	6.6
Montgomery	2.9	1.0	2.5	4.2	3.3	0.7	1.8	4.7	4.4	1.2	1.7	6.2
Prince George's	3.0	1.5	2.5	4.7	3.3	0.9	1.8	4.5	5.3	1.3	2.2	7.4
Queen Anne's	2.1	0.5	1.1	2.7	3.9	1.6	1.7	6.0	5.7	1.6	2.2	8.3
St. Mary's	2.5	1.0	1.4	3.4	4.7	1.3	2.8	4.7	5.1	1.7	2.4	7.9
Somerset	2.4	0.4	1.9	3.6	2.3	1.3	3.4	7.3	4.8	1.5	2.2	7.0
Washington	2.8	0.9	1.9	4.2	3.1	1.0	1.7	4.8	4.8	1.5	2.1	7.1
Wicomico	2.9	1.2	2.4	4.8	4.9	1.5	2.9	7.7	5.2	1.6	2.0	7.3
Worcester	3.3	0.9	2.1	4.9	4.0	0.8	1.6	5.3	5.7	1.4	3.0	8.6
Statewide	2.9	1.2	2.9	4.5	3.9	1.2	2.3	6.0	4.9	1.3	2.1	6.9

1/ Current users only.
2/ Total alcohol consumption.

intake,2/ the following percents of alcohol content were assumed:

- Beer--5.0 percent
- Wine--16.0 percent
- Hard liquor--40.0 percent

Examining the statewide estimates, it is evident that the average quantity of alcohol (of all types) consumed increases with age. It is lowest (4.5 ounces) for young adolescents and highest (6.9 ounces) among late adolescents. This general trend holds true for beer consumption (young--2.9 ounces, middle--3.9 ounces, and late--4.9 ounces), whereas the consumption of wine appears constant (young--1.2 ounces, middle--1.2 ounces, and late--1.3 ounces) across age groups. Interestingly, the average weekly consumption of hard liquor as reported drops slightly across adolescent groups. Young adolescents consume 2.3 ounces and late adolescents consume only 2.1 ounces of hard liquor on a weekly basis.

Comparison of weekly consumption rates between subdivisions shows considerable contrast. For example, the weekly average absolute alcohol consumption among young adolescents ranges from 2.6 ounces for Carroll County to 13.1 ounces in Caroline County.3/ Corresponding ranges for middle and late adolescents also appear to be quite large. Only Montgomery County is below the statewide average at all age levels.

The most notable fact illustrated in Table 6, however, is the substantial quantity of alcohol that Maryland adolescents reported drinking. The 6.9 ounces consumed weekly on the average by late adolescent drinkers is equivalent to consuming two six-packs of beer for every week of the year.

2/ To figure the number of "drinks" that are consumed on a weekly average, the ounces of alcohol must be divided by the percentage of absolute alcohol content and again divided by the ounces of liquid in the beverage; e.g., Allegany County, young adolescent beer consumption: 1.5 ounces alcohol divided by 0.05 ethanol content divided by 12 ounce size bottle or can of beer = 2.5 drinks (in 12 ounce containers) as the average weekly consumption of beer.

3/ Examination of the Caroline County results indicated that extremely high reported usage levels among a small portion of the population raised the mean level considerably.

(2) Alcohol Abuse And Consequences

Although the extensive use and volume of alcohol consumed by Maryland adolescents has been noted, the nature and extent of the abuse of alcohol have not yet been examined. The following tables present data that serve to document the abuse of alcohol and its consequences.

As shown in Table 7a, most Maryland adolescents do not use both alcohol and marijuana (only 10.7 percent, 24.6 percent, and 33.7 percent for young, middle, and late adolescents do). However, for those that do use both substances there is a tendency among older adolescents to use them together. The percentage of those using both that never use them together declines from 45 percent among young adolescents to 16 percent among late adolescents. Also, the percentage usually or always using them together rises from 20 percent among young adolescents to 27 percent among late adolescents.

Frequent alcohol users are more likely to use marijuana than other Maryland adolescents (52.4 percent, 67.4 percent, and 71.2 percent, respectively, of young, middle and late adolescent frequent alcohol users also used marijuana). Just under 40 percent of frequent alcohol users who also use marijuana usually or always use them contemporaneously. This result holds at all three age levels studied (See Table 7b.) In contrast, only 15 percent of late adolescent infrequent alcohol users who also marijuana will usually use them together.

This group of alcohol/marijuana users exhibits no strong preferences between alcohol and marijuana. As shown in Table 8, about one in five adolescents states no preference and the remainder split about evenly in terms of preference between the two drugs. Slightly more young and middle adolescents preferred marijuana to alcohol, but slightly more late adolescents preferred alcohol to marijuana. Even among frequent alcohol users there was a small preference for alcohol over marijuana only among the late adolescents (41.8 percent preferred alcohol, 33.0 percent preferred marijuana).

As shown in Table 9, drug selection between marijuana and alcohol is most often driven by availability of supply. After availability, key motivators were the psychic effect desired, personal plans, and other unspecified factors. Of lesser importance were cost or friends' preferences or a need always to use both substances at the same time.

TABLE 7a

Percent of Youth Using Both Alcohol and Marijuana--1984 Survey

Young Adolescents			Middle Adolescents			Late Adolescents		
Other Than Frequent Users1/	Frequent Users 1/	Overall	Other Than Frequent Users1/	Frequent Users 1/	Overall	Other Than Frequent Users1/	Frequent Users 1/	Overall
13.1	52.4	10.7	23.1	67.4	24.6	27.0	71.2	33.7

TABLE 7b

Concomitant Use of Alcohol and Marijuana By Users of Both Substance--1984 Survey

Use of Alcohol and Marijuana Together	Young Adolescents			Middle Adolescents			Late Adolescents		
	Other Than Frequent Users1/	Frequent Users 1/	Overall	Other Than Frequent Users1/	Frequent Users 1/	Overall	Other Than Frequent Users1/	Frequent Users 1/	Overall
Never	54.5	31.5	45.0	33.0	17.2	26.6	22.6	9.0	16.0
Seldom or Sometime	38.6	29.0	34.9	55.7	45.1	51.2	62.2	52.2	57.3
Usually	4.6	15.8	9.2	9.1	22.0	14.3	13.0	24.7	18.7
Always	2.3	23.7	11.0	2.2	15.7	7.9	2.2	14.1	8.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Users of Alcohol.

TABLE 8

Preference of Users Between Marijuana and Alcohol--1984 Survey[1/]

	Young Adolescents			Middle Adolescents			Late Adolescents		
	Other Than Frequent Users[2/]	Frequent Users[2/]	Total	Other Than Frequent Users[2/]	Frequent Users[2/]	Total	Other Than Frequent Users[2/]	Frequent Users[2/]	Total
Prefer Marijuana	44.2	35.5	40.8	47.6	36.8	43.9	44.0	33.0	38.6
Prefer Alcohol	40.4	32.0	36.8	39.1	37.1	37.8	41.4	41.8	41.6
No Preference	15.4	32.5	22.4	13.3	26.1	18.3	14.6	25.2	19.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ For users of both marijuana and alcohol

2/ Users of alcohol

TABLE 9

Factors Affecting Choice of Marijuana or Alcohol--1984 Survey

	Young Adolescents	Middle Adolescents	Late Adolescents
Availability	28.9	33.1	27.1
Desired Feeling	14.8	15.7	18.2
Other Reasons	23.7	17.8	19.5
Plans	9.7	14.1	18.9
Affordability	8.1	7.1	5.6
Friends Preference	8.1	5.9	5.6
Always Use Them Together	6.7	6.3	5.1
	100.0	100.0	100.0

Another measure of the abuse of alcohol is the number of times Maryland adolescents were "high" or "bombed" during the past year. Table 10 presents the number of occasions that respondents reported being "bombed" for young, middle, and late adolescents. Generally, it was found that for both "frequent" and "other than frequent users," the percentage of adolescents getting "high" or "bombed" increases with the age of the respondent.

The contrast in numbers of times "bombed" or "high" between frequent and nonfrequent drinkers is striking. For each age group, the modal number of occasions "bombed" for nonfrequent drinkers is zero (i.e., 75.7, 53.2, and 43.3 percent for young, middle, and late adolescents, respectively). On the other hand, the modal number of occasions "bombed" for frequent users is "more than 10" for each age group (i.e., 38.6, 63.9, and 67.8 percent for young, middle and late adolescents, respectively). If one is a frequent drinker, that is, a drinker who consumes alcohol at least several times a week, the chances of getting "bombed" or "high" at least once a month are great.

The severity of alcohol abuse among Maryland adolescents can be assessed not only by examining patterns of frequent use but also by analyzing whether adolescents experience a range of problems as a result of their involvement with

TABLE 10

Percentage Distribution of Maryland Adolescents by Number of Times "High" or "Bombed" During the Past Year--1984 Survey

	Young Adolescents			Middle Adolescents			Late Adolescents		
	Other Than Frequent Users	Frequent Users	All Young Adolescents	Other Than Frequent Users	Frequent Users	All Middle Adolescents	Other Than Frequent Users	Frequent Users	All Late Adolescents
Not "high" or "bombed" during past year	75.7	33.2	82.9	53.2	13.4	57.9	43.3	9.2	43.2
"High or "bombed" 1-4 times during past year	17.0	20.6	10.0	26.1	15.0	18.6	32.5	13.4	23.7
"High" or "bombed" 5-10 times during past year	3.2	7.6	2.1	8.3	7.7	6.4	9.0	9.6	8.0
"High" or "bombed" more than 10 times during past year	4.1	38.6	5.0	12.4	63.9	17.1	15.1	67.8	25.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

alcohol use. Table 11 presents the percent of young, middle, and late adolescents who reported having experienced problems with school absences, health, school, family, and the law due to use of alcohol. The data indicate that the frequency of any problems occurring increases substantially with age; 28.8 percent of all late adolescents report some type of problem as a result of their drinking. One-fifth (20.1 percent) of middle adolescents report having problems while only 9.9 percent of young adolescents have experienced any problems of this type.

TABLE 11

Percentage of Maryland Adolescents[1/] by Reported Problems Resulting from the Use of Alcohol--1984 Survey

Type of Problem	Young Adolescents	Middle Adolescents	Late Adolescents
Absences from School	5.2	9.9	17.6
Health Problems	3.9	8.3	9.6
School Problems	3.5	5.6	7.7
Family Problems	4.9	10.0	13.2
Legal Problems	3.2	6.0	8.4
Admitted to Emergency Room Because of Alcohol	2.1	2.9	3.6
Received Treatment Because of Alcohol	2.3	3.2	3.2
Problems of Any Kind	9.9	20.1	28.8

[1/] This table includes reports from all respondents, both users and non-users of alcohol.

The most common problems reported for each of the adolescent groups were those with school attendance and family (young--5.2 percent and 4.9 percent, middle--9.9 percent and 10.0 percent, and late--17.6 percent and 13.2 percent, respectively). Health problems ranked next in importance.

(3) The Demography of Alcohol Abuse Among Maryland Adolescents

Several demographic characteristics other than a person's age were found to be associated with alcohol abuse among Maryland adolescents. These variables include: sex, plans to attend college, grade average, weekly spending money, family size, and race.

Table 12 presents the percentage of Maryland adolescents using alcohol by sex of the individual. While both males and females report approximately the same percentage of use in the past year of beer, wine, and/or hard liquor, males show a more pronounced and sharper increase in frequent use, especially as they get older. For late adolescents, 29.0 percent of all males using alcohol report frequent use, compared to only 17.8 percent of late adolescent females.

A young person's plans to attend college were found to be closely related to alcohol use. Table 13 provides data describing the relationship between college plans and alcohol use. Fewer than one in five late adolescents (19.9 percent) planning to attend college describe themselves as frequent users whereas one in three late adolescents (33.8 percent) not planning to attend college do. The group unsure about their plans has an intermediate percentage of frequent alcohol users (25.7 percent). The association between college plans and percentage of frequent users also holds for young and middle adolescents.

Table 14 illustrates the association between an adolescent's reported grade average in school and the use of alcohol. The data clearly indicate that adolescents of any age group who do not use alcohol are likely to have much better grades than those adolescents who report frequent use of alcohol. For young, middle, and late adolescents, frequent users are more likely to report poorer academic performance. For example, 36.0 percent of young adolescents with failing grades report frequent alcohol use while only 24.0 percent were nonusers. Conversely, excellent grades are associated with a frequent use rate of only 5.3 percent and a nonuse rate of 54.0 percent. This pattern is equally dramatic for both middle and late adolescent groups. Late adolescents with failing grades show 50.9 percent being frequent users and only 6.6 percent not using alcohol. These figures compare with 18.6 percent frequent use and 19.4 percent nonusers for late adolescents with excellent grades.

The use of alcohol is also associated with the amount of weekly spending money available to Maryland adolescents. Table 15 presents the percent of adolescents reporting use of alcohol by weekly spending money in amounts from less than $5.00 to $40.00 or more. There is a strong, direct relationship between

TABLE 12

Percentage Distribution of Maryland Adolescents by Use In Past Year of Either Beer, Wine and/or Hard Liquor by Sex--1984 Survey

	Young Adolescents				Middle Adolescents				Late Adolescents			
Sex	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total
Male	43.9	47.5	8.6	100.0	23.9	60.4	15.7	100.0	13.4	57.6	29.0	100.0
Female	47.1	45.8	7.1	100.0	23.8	62.2	14.0	100.0	15.3	66.9	17.8	100.0

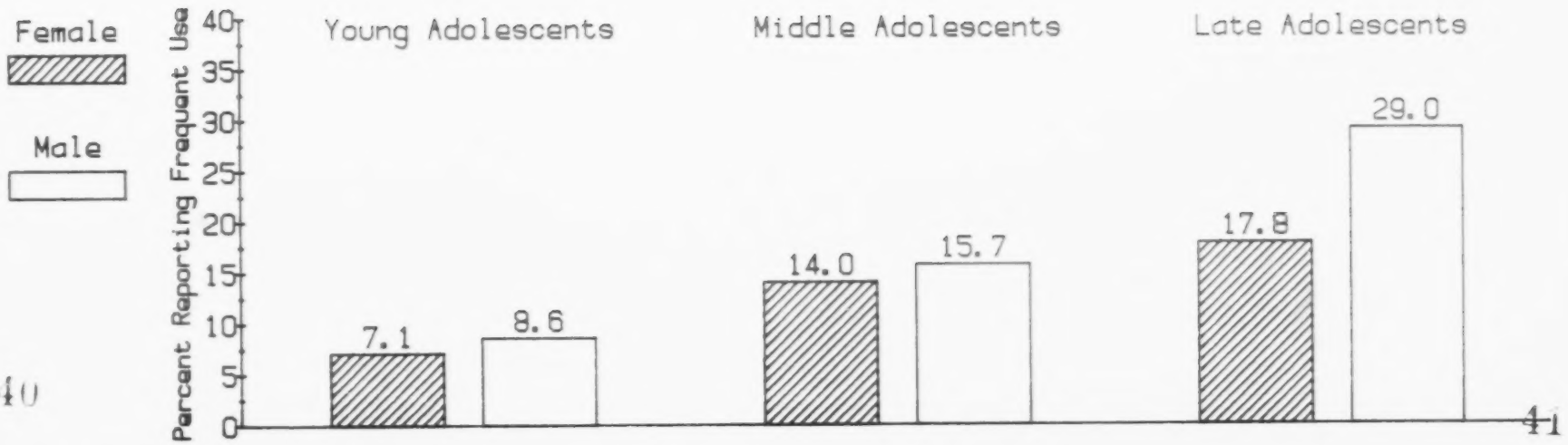


TABLE 13

Percentage Distribution of Maryland Adolescents by Use of Either Beer, Wine, and/or Hard Liquor During the Past Year, by Plans to Attend College--1984 Survey

Plans to Attend College	Young Adolescents				Middle Adolescents				Late Adolescents			
	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total
Yes	48.5	46.0	5.5	100.0	25.0	64.0	11.0	100.0	14.9	65.2	19.9	100.0
Not Sure	42.7	47.2	10.1	100.0	22.5	58.2	19.3	100.0	13.9	60.4	25.7	100.0
No	31.8	48.6	19.6	100.0	19.2	53.4	27.4	100.0	12.9	53.3	33.8	100.0

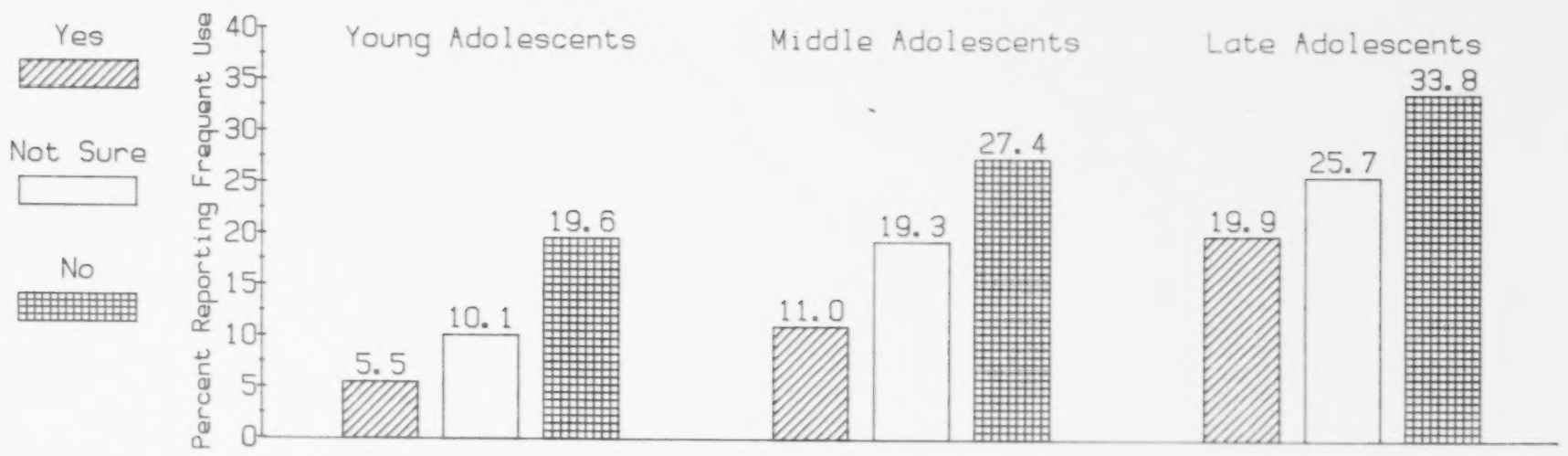


TABLE 14

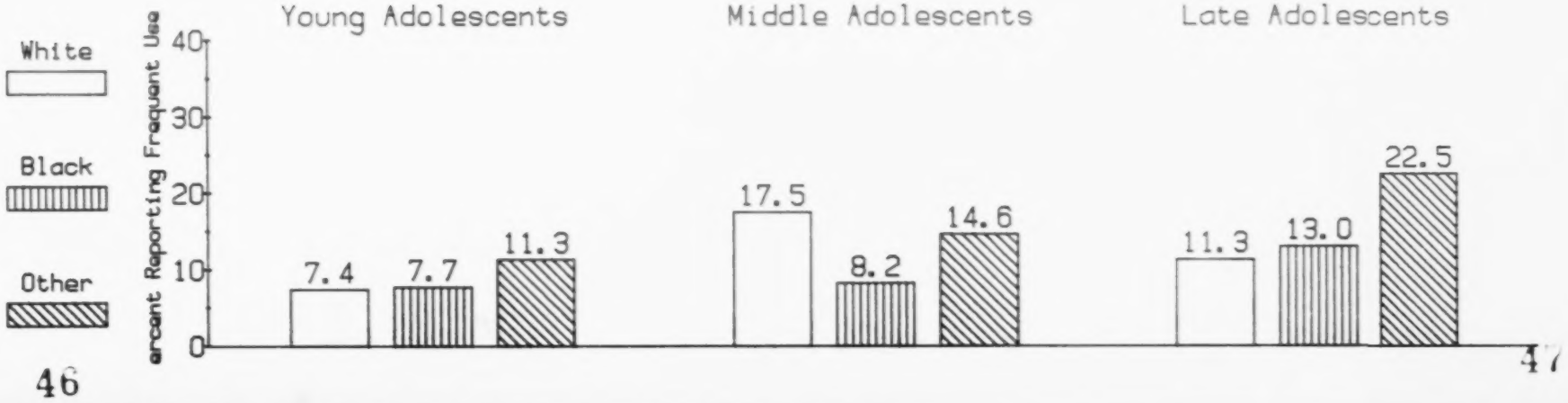
Percentage Distribution of Maryland Adolescents by Use In Past Year of Either Beer, Wine, and/or Hard Liquor by Approximate Grade Average--1984 Survey

	Young Adolescents				Middle Adolescents				Late Adolescents			
Grade Average	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total
Excellent	54.0	40.7	5.3	100.0	30.6	58.0	11.4	100.0	19.4	62.0	18.6	100.0
Good	48.1	46.7	5.2	100.0	26.2	62.3	11.5	100.0	16.0	65.4	18.6	100.0
Satisfactory	40.8	50.6	8.6	100.0	20.5	63.7	15.8	100.0	11.6	61.3	27.1	100.0
Fair	38.4	48.9	12.7	100.0	18.4	59.7	21.9	100.0	10.9	58.3	30.8	100.0
Failing	24.0	40.0	36.0	100.0	12.3	50.0	37.7	100.0	6.6	42.5	50.9	100.0

TABLE 15

Percentage Distribution of Maryland Adolescents by Use in Past Year of Either Beer, Wine, and/or Hard Liquor by Spending Money--1984 Survey

Weekly Spending Money	Young Adolescents				Middle Adolescents				Late Adolescents			
	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total
Less than $5.00	58.1	38.5	3.4	100.0	34.6	58.0	7.4	100.0	29.8	60.0	9.6	100.0
$5.00 to $9.99	46.0	48.8	5.2	100.0	23.8	66.0	10.2	100.0	18.6	65.3	16.1	100.0
$10.00 to $19.99	37.3	52.7	10.0	100.0	19.7	63.9	16.4	100.0	12.7	68.9	18.4	100.0
$20.00 to $29.99	34.9	51.1	14.0	100.0	21.4	60.8	17.8	100.0	10.4	64.7	24.9	100.0
$30.00 to $39.99	27.5	57.3	15.2	100.0	14.7	63.2	22.1	100.0	10.0	60.0	30.0	100.0
$40.00 or More	31.1	42.6	26.3	100.0	21.5	46.7	31.8	100.0	10.9	54.1	35.0	100.0



available spending money and the use of alcohol for all age groups. Percentages of frequent users of alcohol with $40.00 or more weekly spending money are 26.3 percent for young adolescents, 31.8 percent for middle adolescents, and 35.0 percent for late adolescents, whereas only 3.4 percent of young adolescents, 7.4 percent of middle adolescents, and 9.6 percent of late adolescents who have less than $5.00 per week to spend reported frequent use of alcohol. The source of spending money did not appear to be significant.

Table 16 relates alcohol usage to size of family. In general, there are no clear patterns, although middle and late adolescents with five or more siblings are more often frequent alcohol users than people from smaller families.

Table 17 relates drinking behavior to racial characteristics. Among middle and late adolescents, Whites and Others are more often frequent alcohol users than are Blacks. Blacks and Others are more frequently nonusers at these ages. Relatively lower percentages of these in the Other category consider themselves to be occasional users. There were no significant differences observed in drinking patterns among young adolescents based on racial grouping.

2. TRENDS IN ALCOHOL USE AMONG MARYLAND ADOLESCENTS FROM 1978 TO 1982

To gain insights into the changing patterns of substance abuse among Maryland adolescents, statewide and subdivision estimates for 1978, 1980, 1982 and 1984 were compared and contrasted.

The percentage of Maryland adolescents reporting use in the past year of either beer, wine, and/or hard liquor for the 1978, 1980, 1982, and 1984 survey years is presented in Table 18. This histogram indicates that there was no appreciable change in the percentage of alcohol users in Maryland from 1978 to 1982, but that in 1984 a relatively large decrease has been reported. Statewide figures show a slight drop from 1978 to 1982 for all age groups, from 66.3 percent to 62.9 percent for young adolescents, from 79.6 to 79.3 percent for middle adolescents, and from 87.3 to 87.1 percent for the late adolescent group. Between 1982 and 1984, however, the decline is stronger, especially among young adolescents (62.9 percent in 1982 to 54.5 percent in 1984) and middle ado-

TABLE 16

Percentage Distribution of Maryland Adolescents by Use in Past Year of Either Beer, Wine, and/or Hard Liquor by Number of Siblings

Number of Siblings	Young Adolescents				Middle Adolescents				Late Adolescents			
	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total
Zero	41.3	49.9	8.8	100.0	18.0	64.8	17.2	100.0	18.0	64.0	23.9	100.0
One	45.3	48.2	6.5	100.0	22.4	63.9	13.7	100.0	13.8	62.9	23.3	100.0
Two	46.5	46.0	7.5	100.0	26.7	59.8	13.5	100.0	13.9	65.0	21.1	100.0
Three	49.4	42.7	7.9	100.0	27.3	58.4	14.3	100.0	19.0	58.4	22.6	100.0
Four	48.3	39.9	11.8	100.0	30.3	56.0	13.7	100.0	20.6	59.1	20.3	100.0
Five or More	48.7	37.7	13.6	100.0	30.9	43.8	25.3	100.0	17.5	51.2	31.3	100.0

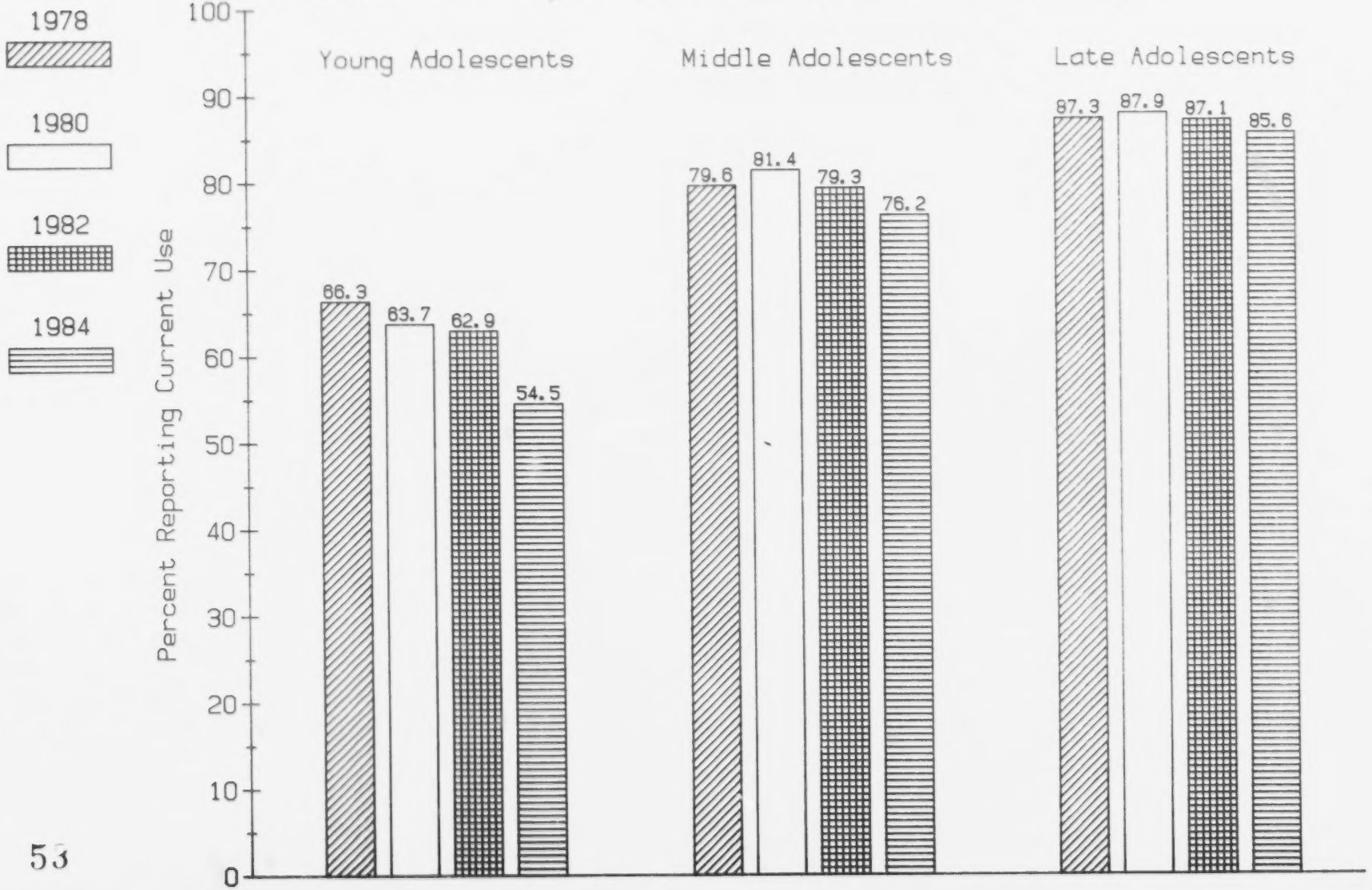
TABLE 17

Percentage Distribution of Maryland Adolescents by Use in Past Year of Either Beer, Wine, and/or Hard Liquor by Race--1984 Survey

Race	Young Adolescents				Middle Adolescents				Late Adolescents			
	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total	Non-Use	Other Than Frequent Use	Frequent Use	Total
White	42.2	50.4	7.4	100.0	17.7	64.8	17.5	100.0	10.6	63.4	26.0	100.0
Black	52.0	40.2	7.7	100.0	37.7	54.1	8.2	100.0	22.9	62.5	14.6	100.0
Other	49.7	39.0	11.3	100.0	37.3	49.7	13.0	100.0	26.1	51.4	22.5	100.0

TABLE 18

Percentage of Maryland Adolescents Reporting Use In Past Year of Beer, Wine, or Hard Liquor--1978, 1980, 1982, and 1984 Surveys



lescents (falling from 79.3 percent to 76.2 percent). Table 19 presents a detailed comparison of weighted estimates for the three most recent survey years. Examination of individual subdivision trends suggests that in some subdivisions the trend appears to be increasing, whereas in others it has stabilized or declined.

When examining the percentage of frequent users statewide (Table 20), there appears to be a substantial decrease from 1980 to 1982 and again from 1982 to 1984 for all three categories of Maryland adolescents. The percent of young adolescents drops from 13.5 percent to 11.5 percent to 7.8 percent, middle adolescents drop from 22.0 percent to 18.1 percent to 14.9 percent, and late adolescents decrease from 30.3 to 26.9 to 23.1 percent. The individual subdivision estimates for frequent users are presented in Table 21. Again, while the general statewide decline is evident, there is a wide variation in trends among individual subdivisions. The percentage of frequent users increased in three counties for young adolescents, five counties for middle adolescents and five counties for late adolescents.

Table 22 compares the percentage of Maryland adolescents reporting consumption of beer, wine, or hard liquor during the past year for 1980, 1982, and 1984. This table indicates a decrease for each type of alcohol from 1980 to 1984 in all three adolescent age groups for each type of user, with much of the decline occurring between 1982 and 1984.

In comparing the mix of different types of alcoholic beverages (beer, wine, and hard liquor), it is evident that adolescents in each age category have not altered their patterns of combining alcoholic beverages. The usage of each type of alcoholic product has declined somewhat proportionally.

Table 23 compares the average weekly consumption (in ounces) of absolute alcohol (from beer, wine, and/or hard liquor) reported for the 1980, 1982, and 1984 surveys for those who drink. Consumption levels have declined for all age levels, falling most for young adolescents (5.4 ounces to 4.5 ounces). Middle and late adolescents show decreases in average weekly consumption of 1.6 ounces and .9 ounces respectively (7.6 ounces to 6.0 ounces for middle and 7.8 ounces to 6.9 ounces for late adolescents). Table 24 displays the average weekly consumption (in ounces of individual types of beverages) for 1980, 1982 and 1984.

TABLE 19

Percentage of Maryland Adolescents Reporting Use
of Either Beer, Wine, and/or Hard Liquor During the Past Year
by Subdivision--1980, 1982, and 1984 Surveys

Subdivision	Young Adolescents			Middle Adolescents			Late Adolescents		
	1980	1982	1984	1980	1982	1984	1980	1982	1984
Allegany	63.5	50.1	49.2	80.0	78.3	73.6	86.8	82.0	85.1
Anne Arundel 3/	66.6	71.4	N/A	81.8	81.5	N/A	86.7	86.3	N/A
Baltimore City	57.9	59.3	52.4	71.5	73.6	67.7	78.4	79.8	78.6
Baltimore County	71.1	66.7	63.1	85.3	82.2	85.9	92.7	92.4	90.1
Calvert	65.7	67.9	59.4	82.2	80.7	84.1	90.9	86.4	85.1
Caroline 1/	68.7	N/A	51.6	78.7	N/A	80.3	90.3	N/A	86.9
Carroll	60.4	66.9	60.0	84.4	81.6	76.1	87.0	87.6	87.9
Charles	62.0	66.1	56.2	86.1	86.3	79.3	90.9	94.8	86.6
Dorchester 1/ 2/	N/A	N/A	52.5	N/A	N/A	75.3	N/A	N/A	86.6
Frederick	60.4	51.1	52.5	85.9	83.7	77.2	90.2	82.3	85.4
Garrett 2/	N/A	55.4	57.7	N/A	81.4	73.9	N/A	85.8	84.2
Harford	59.9	57.1	57.8	85.1	80.9	81.4	90.2	88.2	90.4
Howard	68.9	66.1	50.2	84.6	82.6	79.9	90.5	88.6	87.8
Montgomery	59.1	61.3	47.2	84.0	78.3	74.4	89.5	90.2	84.3
Prince George's 2/	N/A	59.7	49.6	N/A	80.0	71.8	N/A	84.7	84.6
Queen Anne's	73.3	72.9	65.9	86.0	80.0	85.4	90.1	91.4	88.4
St. Mary's 1/	69.3	N/A	61.0	83.9	N/A	80.5	90.4	N/A	81.2
Somerset	63.9	57.7	55.6	69.4	79.5	74.2	88.9	83.8	81.2
Washington	62.6	59.6	59.7	79.4	74.5	70.0	83.4	86.3	82.2
Wicomico	66.7	66.4	59.7	82.3	74.9	82.4	87.6	88.0	87.1
Worcester	62.1	68.1	59.3	77.4	80.3	78.1	89.4	89.1	86.5
Statewide	63.7	62.9	54.5	81.4	79.3	76.2	87.9	87.1	85.6

1/ Did not participate in 1982 survey.
2/ Did not participate in 1980 survey.
3/ Did not participate in 1984 survey.

TABLE 20

Percentage of Maryland Adolescents Reporting Frequent Use of Beer, Wine, or Hard Liquor During the Past Year-- 1980, 1982, and 1984 Surveys

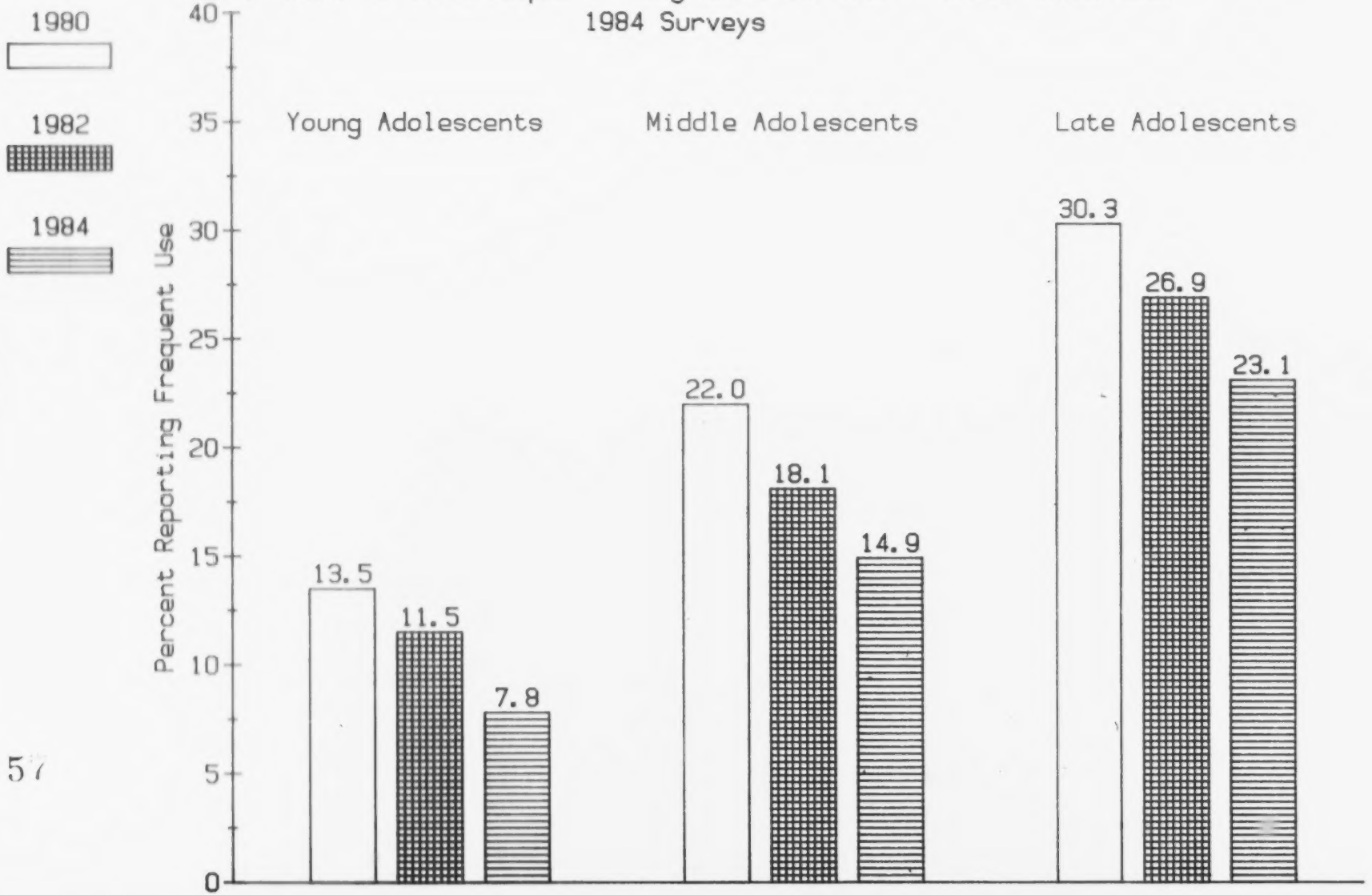


TABLE 21

Percentage of Maryland Adolescents Reporting Frequent Use of Either Beer, Wine, and/or Hard Liquor During the Past Year by Subdivision--1980, 1982, and 1984 Surveys

Subdivision	Young Adolescents			Middle Adolescents			Late Adolescents		
	1980	1982	1984	1980	1982	1984	1980	1982	1984
Allegany	15.8	6.6	8.8	22.7	19.8	21.0	27.3	28.5	27.3
Anne Arundel 3/	17.2	16.8	N/A	23.7	20.6	N/A	31.2	29.7	N/A
Baltimore City	16.9	12.7	10.3	19.0	18.9	16.5	22.9	21.4	17.7
Baltimore County	13.8	11.3	8.9	22.2	20.1	19.4	30.4	34.9	25.4
Calvert	18.3	11.3	10.9	27.2	24.7	22.4	33.2	29.0	26.0
Caroline 1/	15.1	N/A	13.1	24.2	N/A	19.7	29.6	N/A	29.5
Carroll	11.3	10.4	4.8	25.6	13.8	13.7	28.4	27.0	28.1
Charles	16.3	11.8	5.8	25.7	16.3	18.1	33.0	25.3	21.6
Dorchester 1/ 2/	N/A	N/A	6.7	N/A	N/A	19.2	N/A	N/A	21.2
Frederick	13.1	11.7	7.4	31.3	20.2	14.9	34.8	21.1	24.3
Garrett 2/	N/A	5.2	7.4	N/A	14.4	12.2	N/A	19.7	25.1
Harford	8.9	9.5	7.2	22.7	22.2	18.6	37.1	31.5	23.5
Howard	13.6	9.9	5.6	23.4	14.1	16.1	31.4	24.7	22.8
Montgomery	9.7	11.1	5.9	18.7	14.2	11.8	30.8	28.5	20.3
Prince George's 2/	N/A	10.4	6.9	N/A	18.3	8.8	N/A	21.2	24.7
Queen Anne's	11.3	9.1	7.1	31.0	16.3	18.5	34.5	30.2	22.9
St. Mary's 1/	18.8	N/A	7.2	28.2	N/A	18.3	41.1	N/A	22.5
Somerset	15.2	6.1	6.7	15.6	13.6	9.0	28.1	25.1	25.6
Washington	14.4	10.0	8.1	21.3	15.3	11.8	26.5	23.9	19.8
Wicomico	14.2	12.6	9.8	18.0	14.0	19.2	32.8	27.1	24.9
Worcester	14.0	12.8	11.1	21.7	19.7	17.6	30.1	32.6	28.7
Statewide	13.5	11.5	7.8	22.0	18.1	14.9	30.3	26.9	23.1

1/ Did not participate in 1982 survey.
2/ Did not participate in 1980 survey.
3/ Did not participate in 1984 survey.

TABLE 22

Percentage of Maryland Adolescents Reporting Use of Beer, Wine, or Hard Liquor During the Past Year-- 1980, 1982, and 1984 Surveys

Young Adolescents

	Beer			Wine			Liquor		
	1980	1982	1984	1980	1982	1984	1980	1982	1984
Never Used	46.0	45.4	54.0	55.2	54.1	62.4	66.8	65.9	74.4
Any Use	54.0	54.6	46.0	44.8	49.5	37.6	33.2	34.1	25.6
Frequent Use	9.3	9.5	6.3	3.6	3.5	2.4	3.9	4.3	2.7

Middle Adolescents

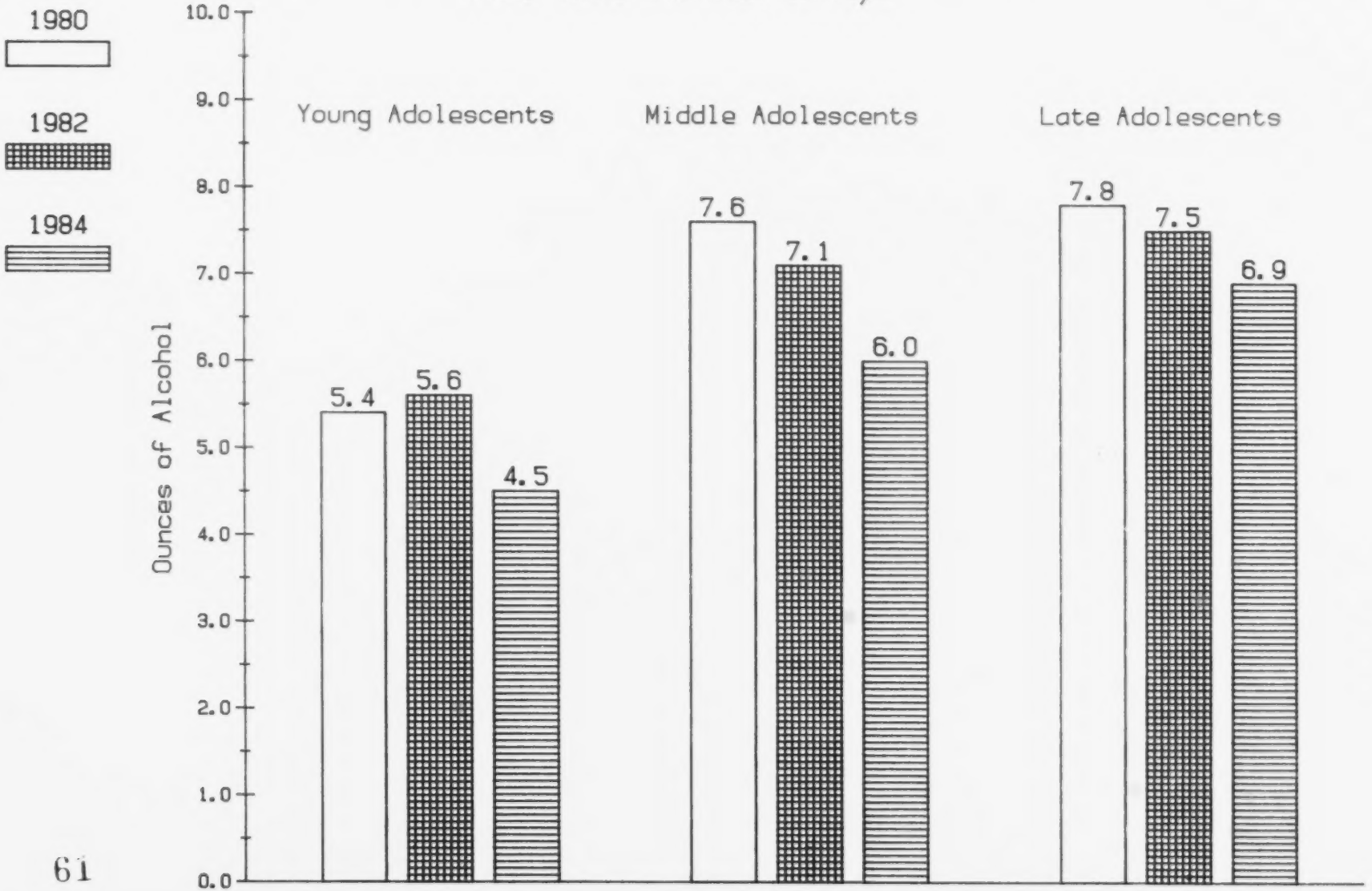
	Beer			Wine			Liquor		
	1980	1982	1984	1980	1982	1984	1980	1982	1984
Never Used	25.8	27.0	31.5	39.9	40.3	44.1	45.1	46.4	50.2
Any Use	74.2	73.0	68.5	60.1	59.7	55.9	54.9	53.6	49.8
Frequent Use	17.9	16.4	13.0	5.1	4.4	3.6	6.5	6.0	5.1

Late Adolescents

	Beer			Wine			Liquor		
	1980	1982	1984	1980	1982	1984	1980	1982	1984
Never Used	19.1	19.3	21.3	32.4	31.9	34.8	36.6	38.2	39.1
Any Use	80.9	80.7	78.7	67.6	68.1	65.2	63.4	61.8	60.9
Frequent Use	26.5	25.3	20.9	4.9	4.7	4.1	5.8	5.1	5.6

TABLE 23

Average Weekly Consumption (in Ounces) of Absolute Alcohol
1980, 1982, and 1984 Surveys



In contrast to the combination of all beverages, there is a slight but consistent increase in ounces consumed for each type of alcohol, for each age category from 1980 to 1982 and then a decline from 1982 to 1984. However, the 1984 consumption level in most cases exceeds the 1980 level, despite the fact that overall consumption levels are lower in 1984 than 1980. It appears that adolescents are consuming greater quantities of any one beverage on the average and are mixing less in terms of overall quantities of alcohol.

TABLE 24

Average Weekly Consumption of Beer, Wine, or Hard Liquor
1980, 1982, and 1984 Surveys

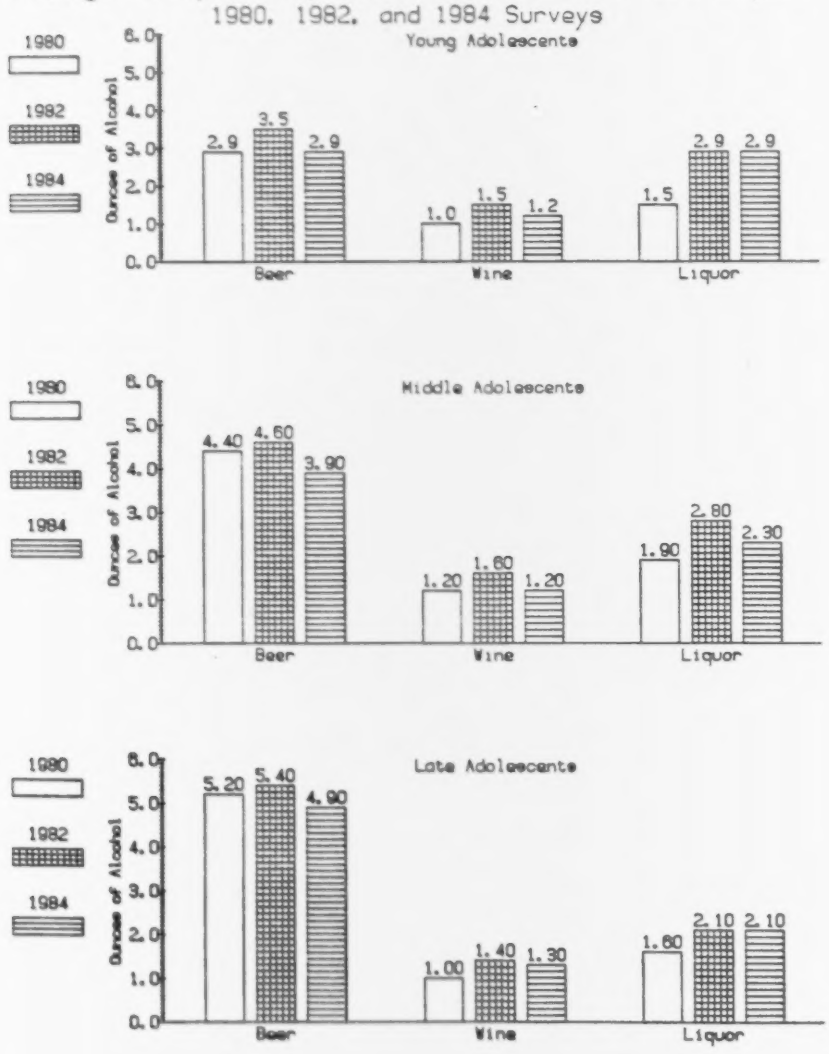


Table 25 presents the percentage of adolescents reporting some types of problems that are related to the use of alcohol for 1980, 1982, and 1984. Examination of this table indicates that young and middle adolescents report fewer overall problems in 1984 than in prior years, but that late adolescent problems have only slightly declined. This would appear to be consistent with the decline in the statewide consumption rates for these years, which are more pronounced for young and middle adolescents. Problems with family and school are the most common type of alcohol-related problems reported by adolescents of all ages.

In 1984, additional data on problems involving alcohol-related emergency room episodes were collected that were not collected in prior years. To maintain comparability, they were not included in estimates of whether adolescents had a "Problem of Any Kind." Had they been included, Problems of Any Kind would have risen only slightly--from 9.7 to 9.9 percent for young adolescents, 20.0 to 20.1 percent for middle adolescents, and 28.7 to 28.8 percent for late adolescents. Most people experiencing an alcohol-related emergency apparently experience one or more other problems.

Table 26 indicates the percent of Maryland adolescents who frequently use alcohol by the number of times "high" or "bombed" for 1980, 1982, and 1984. Again, the data support the slight overall decrease in frequent users of alcohol across adolescent groups. The percentage of young adolescents reporting <u>not</u> being "high" or "bombed" during the past year increased from 21.2 percent to 33.2 percent, while for middle and late adolescents these increases were 9.1 percent to 13.4 percent and 6.7 percent to 9.2 percent, respectively. The percentages of frequent users reporting being "high" or "bombed" more than 10 times during the past year declined significantly for young adolescents, and slightly for middle and late adolescents.

It is clear that, generally speaking, alcohol use appears to be more extensive among older adolescents but that overall levels of usage are declining. In an attempt to explain these trends in a quantitative way, an analytical model was investigated. The model studied predicts that the percentage who used alcohol within the previous twelve months in a group of a given age in a given year can be estimated by adding together three components:

TABLE 25

Percentage of Maryland Adolescents by Reported Problems
Resulting from the Use of Alcohol--1980, 1982, and 1984 Surveys1/

	Young Adolescents			Middle Adolescents			Late Adolescents		
	1980	1982	1984	1980	1982	1984	1980	1982	1984
Absences from School	6.1	5.4	5.2	10.2	10.0	9.9	12.9	13.9	17.6
Problems with Health	5.7	6.2	3.9	9.4	9.3	8.3	10.9	11.4	9.6
Problems at School	5.3	4.3	3.5	6.8	6.4	5.6	5.9	6.8	7.7
Problems with Family	7.2	7.9	4.9	12.8	13.2	10.6	14.0	15.5	13.2
Problems with Law	3.9	4.4	3.2	6.3	7.5	6.0	8.2	10.0	8.9
Problems of Any Kind (Any of the Above)	15.2	15.1	9.7	24.7	25.0	20.0	29.0	30.8	28.7

1/ For problems areas solicited in all three surveys.

TABLE 26

Percentage Distribution of Maryland Adolescents[1/] Frequently Using Alcohol by Number of Times "High" or "Bombed"--1980, 1982, and 1984 Surveys

	Young Adolescents			Middle Adolescents			Late Adolescents		
	1980	1982	1984	1980	1982	1984	1980	1982	1984
Not "high or bombed" during past year	21.2	26.3	33.2	9.1	12.0	13.4	6.7	7.6	9.2
"High" or "bombed" 1-4 times during past year	20.9	18.8	20.6	16.1	13.6	15.0	15.3	13.2	13.4
"High" or "bombed" 5-10 times during past year	9.8	9.7	7.6	10.5	10.6	7.7	9.4	10.0	9.6
"High" or "bombed" more than 10 times during past year	48.0	45.2	38.6	64.3	63.8	63.9	68.6	69.3	67.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Among those using alcohol in the past year.

- An overall average level of alcohol use,
- A differential factor reflecting the age level,
- A differential factor reflecting the year that that group was in eighth grade.

The significance of the model is that it separates changes (usually increases) in alcohol usage that accompany aging, from overall trends in usage.

The model estimated is:

$$y_{ijk} = a + b_i + c_j$$

where y_{ijk} is the percentage of users in the group of students in the ith grade who were in the jth cohort (e.g., in 8th grade in 1980) in subdivision k, "a" is the average percentage level of alcohol usage, b_i is the amount usage is estimated to differ from the overall level for the ith age group, and c_j is the amount usage is expected to differ from the average level depending upon when the group was in 8th grade.

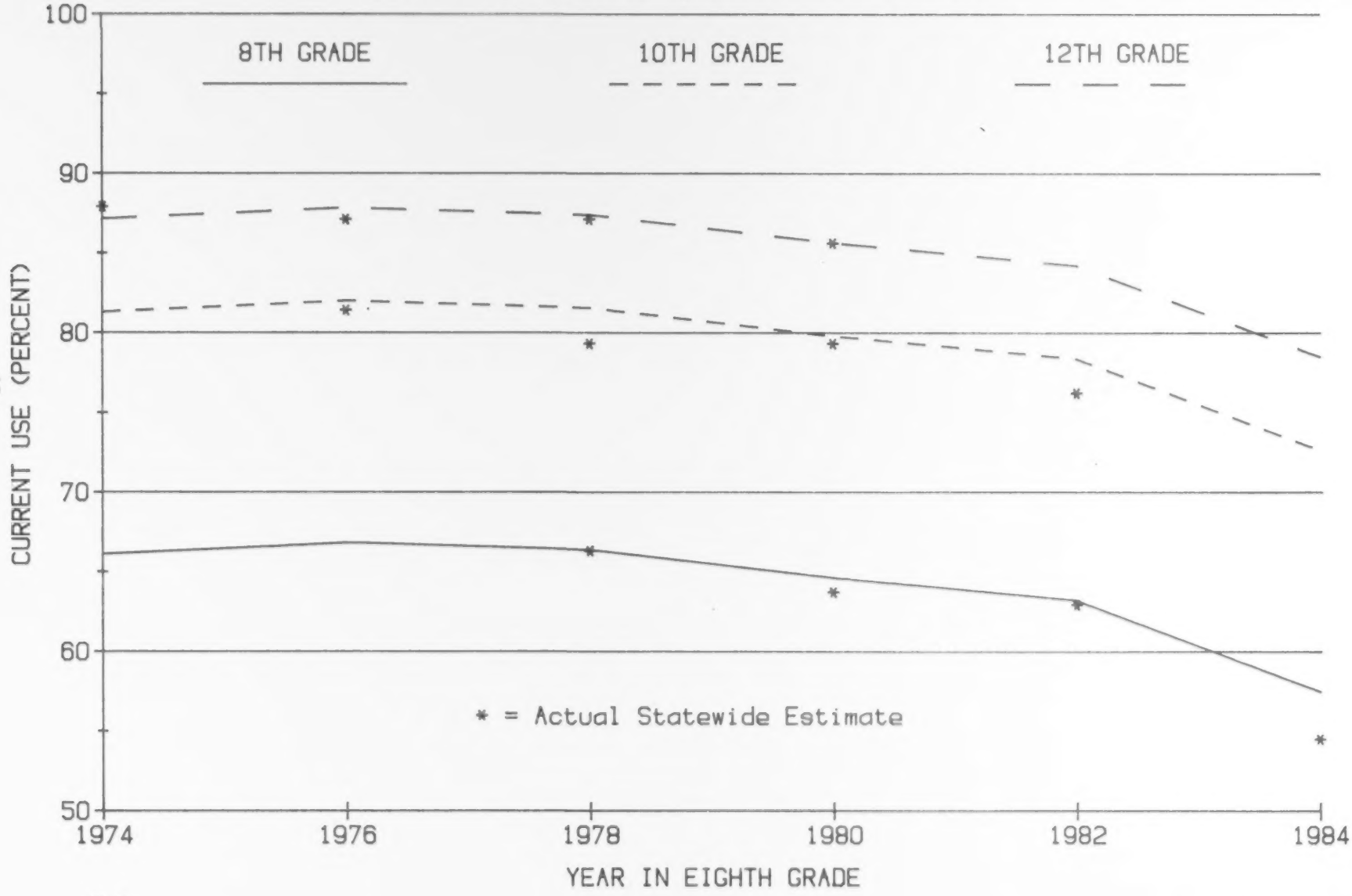
The model was estimated with 168 cases and accounted for 83 percent of the variation in the data, which is good for data of this type. It was found, in order of importance, that age level and cohort year were both significant factors in explaining alcohol use. Interactions of these variables were found not to be important.

Table 27 displays the predicted percentage of current use from the model as a function of the study cohort and grade level. For a given cohort, say 1980 8th graders, the points on the three lines show the usage levels for them when they were in 8th, 10th, and 12th grade (as estimated by the model). The points in asterisks represent comparable statewide estimates from the various surveys.

Table 27 reflects our estimate that, over time, 15.2 percent more 10th graders than 8th graders use alcohol and 5.9 percent more 12th graders than 10th graders use alcohol. Thus, there is a steep rise in usage between 8th and 10th grade, which slows between 10th and 12th grade.

TABLE 27

Estimated Alcohol Use by Cohort Year and Grade



The time series analysis also suggests that alcohol usage peaked with the 1976 cohort and has been declining steadily since then. Relative to the overall usage level of the 1974 cohort usage levels of other cohorts were:

- 1976: +0.7 percent
- 1978: +0.3 percent
- 1980: -1.5 percent
- 1982: -2.9 percent
- 1984: -8.6 percent

3. COMPARISON OF MARYLAND RESULTS WITH A NATIONWIDE STUDY

The National Institute on Drug Abuse (NIDA) recently released the results of its annual survey of student drug use in America.4/ These data were gathered in annual nationwide surveys and involved more than 100,000 high school seniors from public and private schools. Unlike the Maryland survey, which covered 8th, 10th, and 12th graders, the national data were gathered on only 12th graders. The wording of the frequency of use response categories used in the national survey was not identical to that of Maryland survey categories, thus caution must be exercised when comparing the results. Current use in the national survey covered the 30-day period prior to the survey, whereas in the Maryland survey use was defined to include the past year. Because of those methodological differences, higher usage rates in Maryland can be expected. Despite these methodological differences, it is possible to obtain a useful perspective on the use of alcohol by Maryland's late adolescents by comparing these results with national findings.

Table 28 compares the reported use of alcohol for 1978, 1980, and 1982 from the nationwide study to the Maryland surveys for late adolescents (12th graders) only.

4/ Student Drug Use in America: 1975-1984. National Institute on Drug Abuse, January, 1985.

TABLE 28

Percent of Late Adolescents Nationwide[1/] and in Maryland Reporting Use[2/] of Alcohol in 1978, 1980, 1982, and 1984

	Survey Years			
	1978	1980	1982	1984
Nationwide	72.0	72.0	70.0	67.2
Maryland	87.3	87.9	87.1	85.6

1/ Source of Nationwide Data: Monitoring the Future Study: 1984 National Institute on Drug Abuse, January 1985.

2/ Use in the national study is defined as used at least once in the 30 days prior to the survey; in the Maryland survey, use was defined to include the past year.

It appears that reported use of alcohol is higher among late adolescents in Maryland than among their national counterparts, for each of the survey years reported. Some of this difference may be due to the differences in the definitions of use between the national and the Maryland surveys. Trends in alcohol use from 1978 to 1984, however, appear consistent across the two studies. A pattern of general reduction in alcohol use for this age group, from 1980 to 1984, is apparent. The national study also reported that nearly all young people (92.6 percent) have tried alcohol by the end of their senior year. This compares with only 85.6 percent of late adolescents in Maryland who used alcoholic beverages within the past year.

SUMMARY AND CONCLUSIONS

This report presented the results of the 1984 survey of alcohol use among Maryland adolescents. In addition, it outlined adolescent patterns of alcohol use and State trends from 1978 to 1984. Also, the report compared Maryland findings with the results of a nationwide alcohol use study.

Generally, the use of alcohol, as reported by young, middle, and late adolescents between 1978, 1980, 1982 and 1984 has declined in Maryland, which is consistent with national studies of alcohol users. The percentages of ado-

lescents reporting use in the past year declined as did the percentages of Maryland adolescents reporting frequent use of alcohol. This was supported by a decrease in the quantity of absolute alcohol consumed from 1978 to 1984.

Other key findings from this study include:

- Beer is by far the most commonly used alcoholic substance consumed, followed by wine and hard liquor.
- It appears that adolescents may first become introduced to alcohol by drinking beer. As they get older, they begin to use other alcoholic beverages.

Survey results in 1984 also revealed interesting relationships between several demographic characteristics and the use of alcohol:

- Older adolescents reported greater percentages of any use and frequent use of alcohol than younger adolescents.
- Male adolescents reported greater percentages of frequent use of alcohol than female adolescents for all three age categories.
- Adolescents not planning to attend college reported substantially greater percentages of frequent alcohol use than those planning to attend.
- Adolescents reporting a failing grade average in school reported greater percentages of frequent use of alcohol than those reporting excellent grades.
- Adolescents with greater amounts of weekly spending money reported greater percentages of frequent alcohol use than those with less available funds.
- Adolescents who use both alcohol and marijuana are rather evenly divided in the preferences between them.
- Middle and late adolescent Whites are more often frequent users of alcohol than are Blacks.
- Adolescents with five or more siblings were more often frequent alcohol users.

The large quantity of alcohol consumed by Maryland adolescents is somewhat alarming. On the average, late adolescents using alcohol consume the equivalent of almost two six-packs of beer per week. Drinking to intoxication (being

"high" or "bombed") is a serious problem among frequent users of alcohol. Chances of being drunk at least once a month are very great for this group of adolescents.

Finally, a notable relationship emerged between alcohol related problems and the frequent use of alcohol. Adolescents reporting frequent use of alcohol were more likely to report experiencing alcohol-related problems than were other adolescents. Most commonly, these problems centered around one's family or school.

APPENDIX A

MARYLAND ADOLESCENT SURVEY 1984

This questionnaire has been developed by the State Drug Abuse Administration and the Department of Education to survey students' knowledge, attitudes, and experiences concerning the use of drugs and alcohol. Your school is one of the schools chosen to participate in this research.

This study will give us important information that will be used to improve the prevention and treatment programs and services provided for the young people of Maryland. Consequently, your participation is a valuable contribution to these efforts. However, filling out the survey will not be related to your school record in any way.

To make sure no one will know which questionnaire is yours, it is important that you DO NOT SIGN THE QUESTIONNAIRE BOOKLET OR ANSWER SHEET. The serial number on the upper left-hand corner of the answer sheet is for data processing use only. Because your answers will be confidential, we hope that you will feel free to tell us about yourself honestly. The important thing is to tell us what you know and think about drugs and alcohol, whether or not you use them.

In recent years, there has been considerable confusion and misunderstanding by parents, educators, and State officials of how young people feel about drug and alcohol usage. It is hoped that this survey will give you some opportunity to express your own ideas about drugs.

DIRECTIONS

To answer a question, darken the circle corresponding to the one best answer. The important things to remember are:

1. Use a soft (Number 2) pencil. Do not use a ball-point or felt-tip pen.
2. Make your mark as large as you can without going outside the circles.
3. Make heavy, black marks.
4. Consider all the possible answers, and then choose the one best answer.

If you change your mind about an answer, erase your first mark thoroughly. Make no stray marks anywhere on the answer sheet. Do not write in any answers that are not already given. Keep it clean and free from smudges. Do not fold or bend the corners. If you wish to make a comment about a question, you may ask for a sheet of paper when you have finished.

Questions on the survey will be like the one in the example below. In choosing an answer, pick the number of the one best answer for the question. Darken the circle corresponding to that answer on the answer sheet in the box labeled "Example." After you have marked your answer to the example, do not go on until you are told to do so. If you have any questions, please ask them now. If you do not have a Number 2 pencil, please raise your hand. You may now complete the example.

Example

What month is this?

(1) September
(2) October
(3) November
(4) December
(5) January

Remember, do not write your name on this booklet or on the answer sheet. Read all the instructions, questions, and possible answers before completing the questionnaire. When you have finished answering all the questions, please wait quietly for your classmates to finish their questionnaires. We appreciate your cooperation.

PLEASE DO NOT WRITE ON THIS BOOKLET

PART I

1. What was your age on your last birthday?

   (1) Eleven or under
   (2) Twelve
   (3) Thirteen
   (4) Fourteen
   (5) Fifteen
   (6) Sixteen
   (7) Seventeen
   (8) Eighteen or over

2. What is your grade level in school?

   (1) Seventh
   (2) Eighth
   (3) Ninth
   (4) Tenth
   (5) Eleventh
   (6) Twelfth

3. Do you plan to attend college?

   (1) No
   (2) Yes
   (3) Not sure

4. What was your approximate grade average last year?

   (1) Excellent
   (2) Good
   (3) Satisfactory
   (4) Fair
   (5) Failing

5. What is your sex?

   (1) Male
   (2) Female

6. Which best describes you?

   (1) White (Not of Hispanic Origin)
   (2) Black (Not of Hispanic Origin)
   (3) Hispanic
   (4) Oriental (Asian)
   (5) Other

7. How many brothers and sisters are living with you (including step- and half-brothers and sisters)?

   (1) None
   (2) One
   (3) Two
   (4) Three
   (5) Four
   (6) Five or more

8. About how much money do you have to spend each week?

   (1) Less than $5.00
   (2) $5.00 to $9.99
   (3) $10.00 to $19.99
   (4) $20.00 to $29.99
   (5) $30.00 to $39.99
   (6) $40.00 or more

9. What is the major source of your spending money?

   (1) Parents, including allowance
   (2) Wages from job
   (3) Parents and job
   (4) Other

10. How many grades of school were completed by your father?

   (1) Less than seven
   (2) Seven to nine
   (3) Some high school
   (4) High school graduate
   (5) Some college
   (6) College graduate
   (7) Graduate work (education beyond four years of college)
   (8) Don't know

11. How many grades of school were completed by your mother?

(1) Less than seven
(2) Seven to nine
(3) Some high school
(4) High school graduate
(5) Some college
(6) College graduate
(7) Graduate work (education beyond four years of college)
(8) Don't know

12. Do you presently attend a Vocational Technical (Voc-Tech) school?

(1) No
(2) Yes
(3) Not sure

PART II

Questions 13 through 25 ask whether or not certain drugs can be dangerous to your health. Choose the one best answer for each drug and darken the circle corresponding to your answer on your answer sheet. Your choices are:

(1) I believe the drug can be dangerous
(2) I believe the drug cannot be dangerous
(3) I do not know if the drug can be dangerous
(4) I have never heard of the drug

13. Amphetamines (Dexedrine, "pep pills," "uppers," "stims," "black beauties")

(1) Can be dangerous (3) Do not know
(2) Cannot be dangerous (4) Never heard of it

14. Methamphetamines (Methedrine, "speed," "crystal")

(1) Can be dangerous (3) Do not know
(2) Cannot be dangerous (4) Never heard of it

15. Nonprescription pain killers (aspirin, Bufferin, Anacin, Tylenol)

(1) Can be dangerous (3) Do not know
(2) Cannot be dangerous (4) Never heard of it

16. Prescription pain killers (codeine, morphine, Darvon, Tylenol with codeine, Percodan, Dilaudids)

(1) Can be dangerous (3) Do not know
(2) Cannot be dangerous (4) Never heard of it

17. Tranquilizers (Valium, Librium, "vees," "tranqs", Dalmane, Halcion)

(1) Can be dangerous (3) Do not know
(2) Cannot be dangerous (4) Never heard of it

GO TO QUESTION 18

18. Barbiturates (Nembutal, Seconal, "downers," "reds," "yellows," "Xmas trees")

(1) Can be dangerous (3) Do not know
(2) Cannot be dangerous (4) Never heard of it

19. Cocaine ("coke," "snow," "toot," "girl")

(1) Can be dangerous (3) Do not know
(2) Cannot be dangerous (4) Never heard of it

20. Hallucinogens (STP, LSD, or "acid," DMT, "dots," MDA)

(1) Can be dangerous (3) Do not know
(2) Cannot be dangerous (4) Never heard of it

21. Quaaludes ("soapers," "ludes," "lemons," "mandrax," "quaas")

(1) Can be dangerous (3) Do not know
(2) Cannot be dangerous (4) Never heard of it

22. Cigarettes

(1) Can be dangerous (3) Do not know
(2) Cannot be dangerous (4) Never heard of it

23. Marijuana ("pot," "grass," "weed," "joint," "blow," "reefer")

(1) Can be dangerous
(2) Cannot be dangerous
(3) Do not know
(4) Never heard of it

24. Alcohol (beer, liquor, wine - exclude religious use)

(1) Can be dangerous
(2) Cannot be dangerous
(3) Do not know
(4) Never heard of it

25. PCP (phencyclidine, "angel dust")

(1) Can be dangerous
(2) Cannot be dangerous
(3) Do not know
(4) Never heard of it

PART III

This next group of questions asks about some drugs you may have heard of. There is <u>one</u> correct answer for each question. Please do not guess at answers. If you do not know an answer, please darken the circle (4) on your answer sheet, meaning "I don't know."

26. If a person takes amphetamines ("uppers"), he or she:

(1) Becomes sleepy
(2) Stays awake, even though tired
(3) Becomes hungry
(4) I don't know

27. A razor blade is used in the preparation of:

(1) Marijuana
(2) Cocaine
(3) PCP
(4) I don't know

28. A "powder princess" refers to:

(1) High quality heroin
(2) A female cocaine user
(3) A type of diet pill
(4) I don't known

29. If a person takes a barbiturate ("downer"), he or she:

(1) Sees things
(2) Becomes sleepy
(3) Will be wide awake
(4) I don't know

30. "Love Boat" or "Luv Boat" is:

(1) The mixing of alcohol and pills
(2) A "high" from taking drugs
(3) Marijuana laced (mixed) with PCP
(4) I don't know

31. LSD is a:

(1) Narcotic
(2) Stimulant
(3) Hallucinogen
(4) I don't know

32. Which of the following is a narcotic?

(1) Methedrine
(2) Heroin
(3) Mescaline
(4) I don't know

33. If a person takes quaaludes ("ludes"), which of the following will not happen?

(1) Slurred speech and drunken behavior
(2) Increased alertness
(3) Becoming addicted
(4) I don't know

34. "Freebasing" is:

(1) Borrowing drugs from friends
(2) Not getting caught in an illegal drug sale
(3) Changing cocaine to a substance that can be smoked
(4) I don't know

35. "Flakes" refer to:

(1) Marijuana
(2) PCP on parsley
(3) Cocaine
(4) I don't know

36. A "roach" is:

(1) A narcotics agent
(2) A bad trip
(3) The butt of a joint
(4) I don't know

37. First offense for possession of marijuana in Maryland can get a person:

(1) At most 5 years and/or $1,000 fine
(2) At most 1 year and/or $1,000 fine
(3) At most 30 days and/or $100 fine
(4) I don't know

38. Hashish or hash is:

(1) An amphetamine
(2) A water pipe
(3) From the same plant as marijuana
(4) I don't know

39. PCP (phencyclidine) is most frequently:

(1) Taken orally, in pill form
(2) Inhaled or sniffed
(3) Sprayed on parsley and smoked
(4) I don't know

40. "Bam" is:

(1) Preludin
(2) Cocaine
(3) An inhalant
(4) I don't know

41. The most life-threatening type of withdrawal is from:

(1) Amphetamines
(2) Barbiturates
(3) Heroin
(4) I don't know

42. "Huffing" means:

(1) Smoking hashish
(2) Sniffing glue
(3) Snorting heroin
(4) I don't know

43. "Cold turkey" means

(1) Disposing of drugs during a raid
(2) Spending time in a Federal prison
(3) Getting off drugs without medical help
(4) I don't know

44. Withdrawal pains are <u>not</u> felt by the person who stops taking:

(1) Heroin
(2) Barbiturates ("downers")
(3) Mescaline
(4) I don't know

PART IV

45. Babies born to mothers who are narcotic addicts are most likely to:

(1) Be addicted and undergo withdrawal
(2) Be normal babies
(3) Be twins
(4) I don't know

46. "Chipping" refers to:

(1) Smoking marijuana
(2) The use of cocaine
(3) Occasional or weekend use of heroin
(4) I don't know

47. Drinking alcohol and taking barbiturates together may lead to:

(1) Death
(2) Increased energy
(3) Hepatitis
(4) I don't know

48. "Crank" refers to:

(1) Cocaine that has been cut with other substances
(2) Injecting drugs
(3) Methamphetamines
(4) I don't know

49. "Rush" is:

(1) The feeling of being high on drugs
(2) A substance that can be inhaled
(3) Pressure from friends or peers to use drugs
(4) I don't know

PART V

In questions 50 through 63, indicate which, if any, of the following substances or drugs you have used WITHOUT A DOCTOR'S ORDER OR DIRECTION TO YOU. For each question, pick out the one answer that is correct for you. That is, whether you never used the substance or the age at which you first used it. Darken the circle corresponding to your answer.

50. At what age, if ever, did you first use marijuana, ("pot," "grass," "weed," "joint," "blow," "reefer")?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

51. At what age, if ever, did you first use tranquilizers (Valium, Librium, "vees," "tranqs," Dalmane, Halcion)?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

52. At what age, if ever, did you first use Quaaludes ("soapers," "ludes," "lemons," "quaas," "mandrax")?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

53. At what age, if ever, did you first use amphetamines (Dexedrine, "pep pills," "uppers," "stims," "black beauties")?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

54. At what age, if ever, did you first use cigarettes?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

55. At what age, if ever, did you first use heroin ("junk," "H," "smack," "boy")?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

56. At what age, if ever, did you first use cocaine ("coke," "snow," "toot," "girl")?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

57. At what age, if ever, did you first use hashish?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

58. At what age, if ever, did you first use hallucinogens (STP, LSD or "acid," DMT, "dots," MDA)?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

59. At what age, if ever, did you first use barbiturates (Nembutal, Seconal, "downers," "reds," "yellows," "Xmas trees")?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

60. At what age, if ever, did you first use solvents (glue, cleaning fluid, paint)?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

61. At what age, if ever, did you first use methamphetamines (Methedrine, "speed," "crystal")?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

62. At what age, if ever, did you first use PCP (phencyclidine, "angel dust")?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

63. At what age, if ever, did you first use alcohol (beer, liquor, wine - excluding religious use)?

(1)	Never used	(6)	Fourteen
(2)	Ten or under	(7)	Fifteen
(3)	Eleven	(8)	Sixteen
(4)	Twelve	(9)	Seventeen
(5)	Thirteen	(10)	Eighteen or above

PART VI

In questions 64 through 77, pick out the answer that best describes your current use or non-use of each of the following substances or drugs WITHOUT A DOCTOR'S ORDER OR DIRECTION TO YOU. Choose one of the seven answers listed below for each substance and darken the corresponding circle on your answer sheet.

(1) I have never used it
(2) I have used it or tried it, but I am not currently using it
(3) I currently use it less than once a month
(4) I currently use it about once a month
(5) I currently use it about once a week
(6) I currently use it several times a week
(7) I currently use it one or more times a day

	Substance Or Drug	Never Used	Used or Tried But Not Currently Using	Current Use: Use Less Than Once a Month	Use Once a Month	Use Once a Week	Use Several Times a Week	Use Once or More a Day
64.	Marijuana ("pot," "grass," "weed," "joint," "blow," "reefer")	1	2	3	4	5	6	7
65.	Tranquilizers (Valium, Librium, "vees," "tranqs," Dalmane, Halcion)	1	2	3	4	5	6	7
66.	Quaaludes ("soapers," "ludes," "lemons," "mandrax", "quaas")	1	2	3	4	5	6	7
67.	Amphetamines (Dexedrine, "pep pills," "uppers," "stims," "black beauties")	1	2	3	4	5	6	7
68.	Cigarettes	1	2	3	4	5	6	7
69.	Heroin ("junk," "H," "smack," "boy")	1	2	3	4	5	6	7
70.	Cocaine ("coke," "snow," "toot," "girl")	1	2	3	4	5	6	7
71.	Hashish	1	2	3	4	5	6	7
72.	Hallucinogens (STP, LSD or "acid," DMT, "dots," MDA)	1	2	3	4	5	6	7
73.	Barbiturates (Nembutal, Seconal, "downers," "reds," "yellows," "Xmas trees")	1	2	3	4	5	6	7
74.	Solvents (glue, cleaning fluid, paint)	1	2	3	4	5	6	7
75.	Methamphetamines (Methedrine, "speed," "crystal")	1	2	3	4	5	6	7
76.	PCP (phencyclidine, "angel dust")	1	2	3	4	5	6	7
77.	Alcohol (beer, liquor, wine--excluding religious use)	1	2	3	4	5	6	7

PART VII

78. During the past year, how often, if at all, did you drink beer?

(1) Never
(2) Less than once a month
(3) Once a month
(4) Every other week
(5) Once a week
(6) Two to three days a week
(7) Four to six days a week
(8) Daily

79. During the times you drank beer (as indicated in Question 78), about what quantity did you usually drink? (A beer is a 12 oz. bottle)

(1) I didn't drink beer this past year
(2) Two beers or less
(3) Three to four beers
(4) Five to six beers
(5) Seven to ten beers
(6) Eleven or more beers

80. During the past year, how often, if at all, did you drink wine (excluding religious use)?

(1) Never
(2) Less than once a month
(3) Once a month
(4) Every other week
(5) Once a week
(6) Two to three days a week
(7) Four to six days a week
(8) Daily

81. During the times you drank wine (as indicated in Question 80), about what quantity did you usually drink? (A "glass" is half an 8 oz. glass; a "bottle" is a 24 oz. bottle or fifth).

(1) I didn't drink wine this past year
(2) Two glasses or less
(3) Three to four glasses
(4) Five to six glasses
(5) Seven or more glasses
(6) Less than one-half bottle
(7) One-half bottle to one bottle
(8) One bottle or more

82. During the past year, how often, if at all, did you drink hard liquor (whiskey, gin, vodka, etc.)?

(1) Never
(2) Less than once a month
(3) Once a month
(4) Every other week
(5) Once a week
(6) Two to three days a week
(7) Four to six days a week
(8) Daily

83. During the times you drank liquor (as indicated in Question 82), what quantity did you usually drink? (A drink is made with 1 to 1 1/2 oz. of liquor)

(1) I didn't drink liquor this past year
(2) One to two drinks or less
(3) Three to four drinks
(4) Five to six drinks
(5) Seven to ten drinks
(6) Eleven or more (one pint or more)

PART VIII

Questions 84 through 86 ask about using alcohol and marijuana together. If you do not use alcohol and marijuana, or if you use just one of them, fill in the circle for (1) on your answer sheet, meaning "Does not apply," for each of the three questions.

84. How often, if at all, do you use both marijuana and alcohol together (on the same occasion or at the same time of day)?

(1) Does not apply--I do not use alcohol and marijuana or I use only one of them
(2) I use both but never at the same time
(3) I seldom use them at the same time
(4) I sometimes use them at the same time
(5) I usually use them at the same time
(6) I always use them at the same time

85. If you currently use both marijuana and alcohol, which do you prefer?

(1) Does not apply--I do not use alcohol and marijuana or I use only one of them
(2) I use both, but prefer marijuana to alcohol
(3) I use both, but prefer alcohol to marijuana
(4) I use both, but I have no preference--I like them equally well

86. If you currently use both marijuana and alcohol, what makes you decide whether to use one or the other? Choose the ONE BEST ANSWER.

(1) Does not apply--I do not use alcohol and marijuana or I use only one of them
(2) I always use them together
(3) I use whichever one is available
(4) I use whichever one I can afford
(5) I use whichever one my friends are using
(6) It depends on what I plan to be doing
(7) It depends on how I want to feel
(8) None of the above--something else makes me decide

PART IX

87. Have you ever been absent from school because you used drugs (excluding alcohol)?

(1) No
(2) Yes

88. Have you ever had health problems because you used drugs (excluding alcohol)?

(1) No
(2) Yes

89. Have you ever had problems at school because you used drugs (excluding alcohol)?

(1) No
(2) Yes

90. Have you ever had family problems because you used drugs (excluding alcohol)?

(1) No
(2) Yes

91. Have you ever had any problems with the law because you used drugs (excluding alcohol)?

(1) No
(2) Yes

92. Have you ever been admitted to an emergency room because you used drugs (excluding alcohol)?

(1) No
(2) Yes

93. Have you ever been in treatment because you used drugs (excluding alcohol)?

(1) No
(2) Yes

PART X

94. Have you ever been absent from school because you used alcohol?

(1) No
(2) Yes

95. Have you ever had health problems because you used alcohol?

(1) No
(2) Yes

96. Have you ever had problems at school because you used alcohol?

(1) No
(2) Yes

97. Have you ever had family problems because you used alcohol?

(1) No
(2) Yes

98. Have you ever had any problems with the law because you used alcohol?

(1) No
(2) Yes

99. Have you ever been admitted to an emergency room because you used alcohol?

(1) No
(2) Yes

100. Have you ever been in treatment because you used alcohol?

(1) No
(2) Yes

PART XI

101. Indicate the number of times, if any, during the past year, you have been "high" or "bombed" on alcohol.

(1) I have never used alcohol in my life
(2) I have used alcohol but have never been "high" or "bombed"
(3) I have not been "high" or "bombed" in the past year
(4) Once in past year
(5) Twice in past year
(6) Three to four times in past year
(7) Five to ten times in past year
(8) More than ten times in past year

102. Indicate the number of times, if any, during the past year, you have been "high" or "stoned" on drugs (excluding alcohol).

(1) I have never used drugs in my life
(2) I have used drugs but have never been "high" or "stoned"
(3) I have not been "high" or "stoned" in the past year
(4) Once in past year
(5) Twice in past year
(6) Three to four times in past year
(7) Five to ten times in past year
(8) More than ten times in past year

PART XII

103. Do you know of any hotlines or crisis centers in your area?

(1) No
(2) Yes

104. Have you ever called a hotline or gone to a crisis center with a drug or alcohol problem?

(1) No
(2) Yes

PART XIII

In questions 105 to 111, explain what alcohol and other Drug Education programs you have participated in at this school or at another school you attended. If the program was not offered, mark the circle for ③ , "It was not offered," on your answer sheet.

105. Have you participated in a school program featuring alcohol or drug films?

(1) No, but it was offered
(2) Yes
(3) It was not offered
(4) Don't know

106. Have you participated in Health Education classes or courses on alcohol or drugs?

(1) No, but it was offered
(2) Yes
(3) It was not offered
(4) Don't know

107. Have you participated in classes on alcohol or drugs in courses other than Health Education?

(1) No, but it was offered
(2) Yes
(3) It was not offered
(4) Don't know

108. Have you participated in program(s) sponsored by Student Alcohol/Drug Committees?

(1) No, but it was offered
(2) Yes
(3) It was not offered
(4) Don't know

109. Have you participated in small group discussions on alcohol or drugs, led by a teacher or counselor?

(1) No, but it was offered
(2) Yes
(3) It was not offered
(4) Don't know

110. Have you attended a school program featuring presentations by recovered alcoholics or drug addicts?

(1) No, but it was offered
(2) Yes
(3) It was not offered
(4) Don't know

111. Have you participated in other types of alcohol or drug programs at school?

(1) No, but it was offered
(2) Yes
(3) It was not offered
(4) Don't know

PART XIV

112. Overall, my participation in school alcohol/drug education programs, as indicated above has (CHOOSE THE ONE BEST ANSWER):

(1) Had no effect on my using or not using drugs
(2) Led to a decrease in my drug usage
(3) Led to an increase in my drug usage
(4) Led to my initial taking of drugs
(5) Convinced me not to start using drugs
(6) Does not apply--I have never participated in drug education programs at school.

113. Which one of the following have you found to be your most useful source of accurate and complete information about drugs? CHOOSE THE ONE BEST ANSWER:

(1) My family
(2) My friends
(3) Teachers
(4) School programs
(5) Doctors
(6) Newspaper, magazines
(7) TV, movies
(8) Hotlines
(9) My own experience
(10) Other sources

**PLEASE REVIEW YOUR ANSWERS.
BE SURE YOU DARKENED ONE AND
ONLY ONE CIRCLE FOR EACH QUESTION.**

APPENDIX B

WEIGHTING FACTORS BY SUBDIVISION AND GRADE LEVEL

Subdivision	8th Grade	10th Grade	12th Grade
Allegany	2.199	2.493	3.092
Baltimore City	12.105	11.604	6.990
Baltimore County	8.463	9.208	9.219
Calvert	1.053	1.676	1.488
Caroline	1.143	1.295	1.215
Carroll	2.911	4.155	5.388
Charles	1.711	2.254	3.214
Dorchester	1.229	1.295	1.250
Frederick	2.526	4.431	4.526
Garrett	1.213	1.156	1.190
Harford	3.925	3.595	3.595
Howard	2.984	3.014	2.768
Montgomery	5.205	6.795	7.170
Prince George's	11.942	12.900	12.033
Queen Anne's	1.134	1.234	1.219
St. Mary's	1.182	1.234	1.665
Somerset	1.644	1.439	1.744
Washington	2.164	2.372	3.497
Wicomico	1.961	1.570	1.877
Worcester	1.145	1.484	1.220